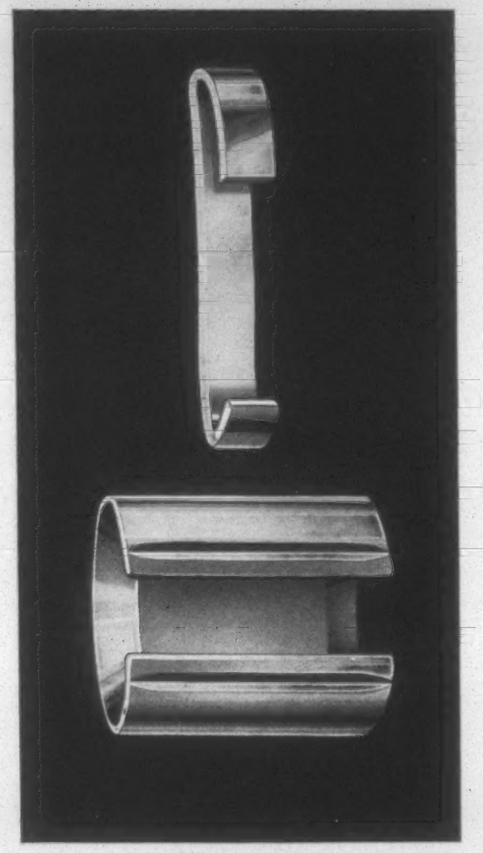
TEXTILE BULLETIN

VOL. 62 JUNE 15, 1942 NO. 8

Uniformity in Spinning Means Quality in Yarns!



—that's why more and more spinners are changing to these Travelers.....with profit!

Uniformity is absolutely essential to successful spinning and twisting of all fibres. Uniformity is absolutely essential in Ring Travelers. Universal Standard Ring Travelers are manufactured with the emphasis on absolute uniformity. The most modern machine tools plus skilled laborers insure uniformity of weight and shape. Highest quality steel and bronze alloys are used. These travelers will contribute, more than any other single factor, to a uniform QUALITY product.

BEVEL EDGE

The Bowen Patented Bevel Edge feature of U. S. Ring Travelers produces ideally smooth, even yarn. There are no angular edges to flatten the end. There are no split ends in throwing rayon—no fly waste in the spinning and twisting of cotton, wool, worsted, asbestos, kindred fibres. Made and stocked in all sizes and weights, for all kinds and counts of yarns.

Sold under the trade names: Bowen Round Point Travelers; Bowen Square Point Travelers; Bowen Improved Vertical Bronze; Bowen Patented Bevel Edge; Bowen Patented Ne-Bow Vertical; Bowen Patented Vertical; Bowen Patented Vertical Offset; Bowen Flat Oval and Round Wire Travelers.

U. S. RING TRAVELER CO.

PROVIDENCE, R. I. AMOS M. BOWEN, Pres. and Treas. **GREENVILLE, S. C.**

SOUTHERN SALES REPRESENTATIVES

T. L. Maynard
P. O. Box 456
Belmont, N. C.

William P. Vaughan and William H. Rose
P. O. Box 792, Greenville, S. C.

Oliver B. Land
P. O. Box 158
Athens, Georgia

A Traveler for Every Fibre

Published Semi-Monthly by Clark Publishing Company, 218 W. Morehead St., Charlotte, N. C. Subscription $1.50 per year in advance. Entered as second-class mail matter March 2, 1911, at Postoffice, Charlotte, N. C., under Act of Congress, March 2, 1897.

THIS IS NO. 33 OF A SERIES ON

GETTING THE MOST FROM WINDING

Information about winding designed to show improvements in winding equipment and new ideas in the winding operation

EMPTY BOBBIN CONVEYOR (Roto-Coner*)

Many of the mills operating Roto-Coners* believe that the Empty Bobbin Conveyor is one of the most valuable features, making it easier for the operator to handle the bobbins and improving the cleanliness of the machine. Yet there are some mills which do not realize its many advantages, and we are frequently asked why it is desirable to have a conveyor.

Fig. 1. Empty bobbins removed from the supply spindles are placed on the conveyors and are carried to the end of the machine where they are accumulated in empty bobbin boxes.

Slow-speed machines were not equipped with conveyors, and the empty bobbins were placed in boxes by the operator. It took a long time for the boxes to fill up, and a small quantity of full bobbins was sufficient to supply many spindles.

On the high-speed Roto-Coner*, the bobbins run out very quickly, and a greater amount of storage space is required for full bobbins. For this reason, an Empty Bobbin Conveyor (Fig. 1) was built into the machine, replacing the boxes beneath the supply spindles. This improved the appearance of the machine, increased the production of the operator and made it unnecessary for the collector of empty bobbins to enter the alley where the operator is working.

The operator of the Roto-Coner* has a continuous supply of fresh yarn at her fingertips, since with no boxes needed for empty bobbins, more space has been devoted to carrying a larger supply of fresh yarn. This supply does not have to be replenished so often, and the operator has less interference by the yarn boy distributing full bobbins.

There is one conveyor for each side of the machine, so it is convenient to use bobbins of different types on each side without danger of getting them mixed when removed from the machine.

CONING AND TUBING ON THE ROTO-CONER*

Many mills find that with their changing requirements, they have a need for converting their drum winders from coning to tubing. It is possible to equip one side of the Roto-Coner* for coning and the other side for tubing, but when the complete machine has to be changed over, it is necessary — with the Roto-Coner* as with any drum winder — to change the traversing mechanism as well as the spindles.

On a reciprocating-guide winder, this is done by changing the cams and other parts of the traversing mechanisms. On the Roto-Coner*, it is done by replacing the Rotating Traverses.

Each 20-spindle section has a shaft on each side holding 10 traverses and the ball bearings. This shaft is coupled to other sections to make up the full machine.

By removing the bearing caps and loosening the couplings, it is an easy matter to lift out each section and replace with a new section having the desired Rotating Traverses. (Fig. 2.)

Spare shafts can be stored, out of the way, on a bracket against the wall. The shaft is completely dry — there is no grease to make messy work, no lint accumulation to remove, no cleaning necessary before storage. Furthermore, the shaft is all one piece; there are no cams and small parts, as with a reciprocating-guide machine, to handle, sort and store.

When changing from coning to tubing it will also be necessary to replace the cone holders with spindles for tubing. It will not be necessary to remove the spindle holder arms.

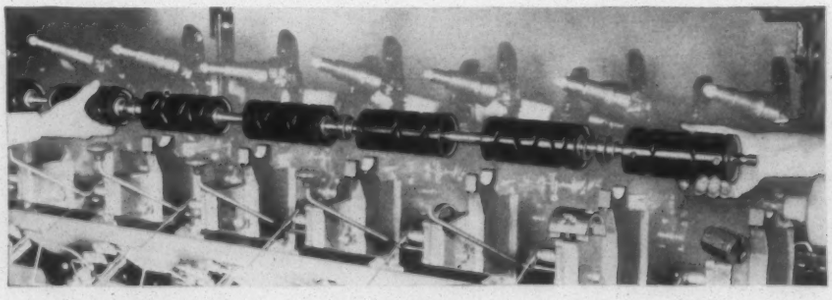


Fig. 2

See our Catalog in TEXTILE YEARBOOK

"THERE'S A UNIVERSAL WINDER FOR EVERY TEXTILE NEED"

UNIVERSAL WINDING COMPANY

PROVIDENCE BOSTON PHILADELPHIA UTICA CHARLOTTE ATLANTA

*Reg. U.S. Pat. Off.

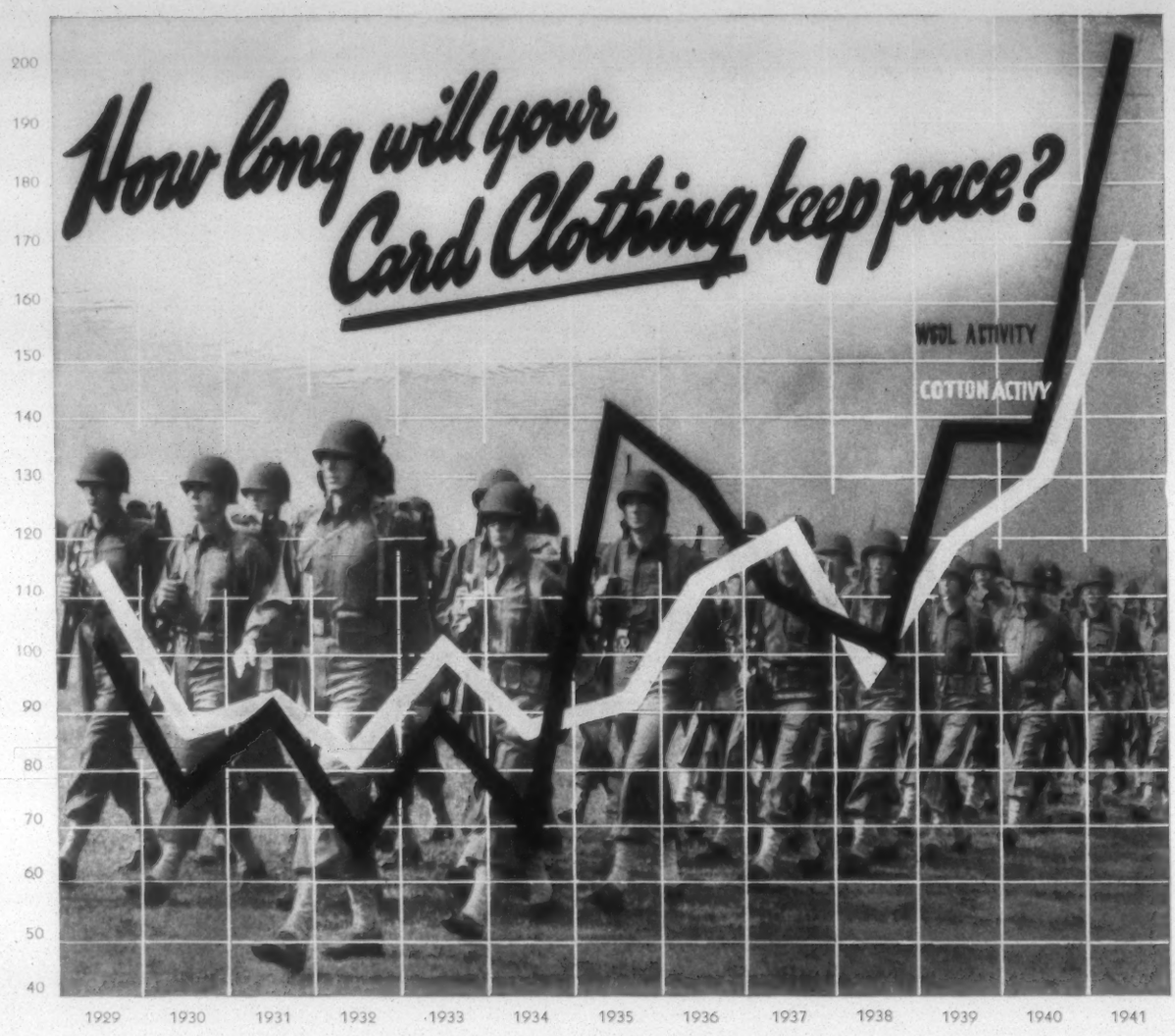


Photo by U. S. Army Signal Corps.

See what's happening? Cotton and Wool consumption is shooting skyward *and all of it must be processed by card clothing.* ★ Tests in hundreds of mills prove the value of Tufferized Card Clothing—both in better product and greater production. ★ During these times it is our job first to help you get as much as possible out of your present equipment. Next we must make every effort to see that you get new equipment when the need is apparent.

★ Right now our representatives have much to give of accumulated experience. Ask them to check over your equipment so you may profit by their suggestions.

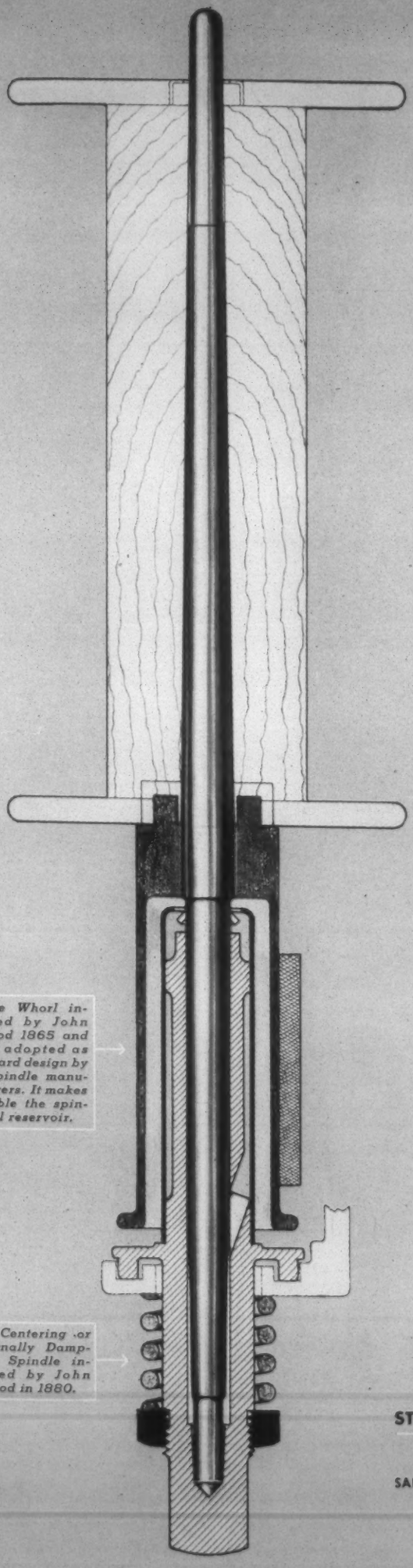
TUFFER CARD CLOTHING

Card Clothing for Woolen, Worsted, Cotton, Asbestos and Silk Cards • Napper Clothing, Brush Clothing, Strickles, Emery Fillets. Top Flats Recovered and extra sets loaned at all plants. Lickerins and Garnet Cylinders from 4 to 30 inches and Metallic Card Breasts Rewired at Southern Plant • Midgley Patented, and Howard's Special Hand Stripping Cards • Inserted Eye & Regular Wire Heddles

HOWARD BROS. MFG. CO.

WORCESTER, MASSACHUSETTS

Southern Plants: Atlanta, Ga., Gastonia, N. C. **Branch Offices:** Philadelphia, Dallas. **Canadian Agents:** Colwool Accessories, Ltd., Toronto 2



Sleeve Whorl invented by John Atwood 1865 and later adopted as standard design by all spindle manufacturers. It makes possible the spindle oil reservoir.

Self-Centering or Externally Dampened Spindle invented by John Atwood in 1880.

NOW ...more than ever!

YOU NEED

GENUINE ATWOOD SPINDLES

The spindle is *the heart of the machine* and the Atwood Spindle is the *"daddy of them all."*

Hundreds of thousands of Atwood spindles are demonstrating every day that Atwood has the combination of fundamentally correct design, craftsmanship and precision production facilities that assures maximum spindle performance, dependability and economy.

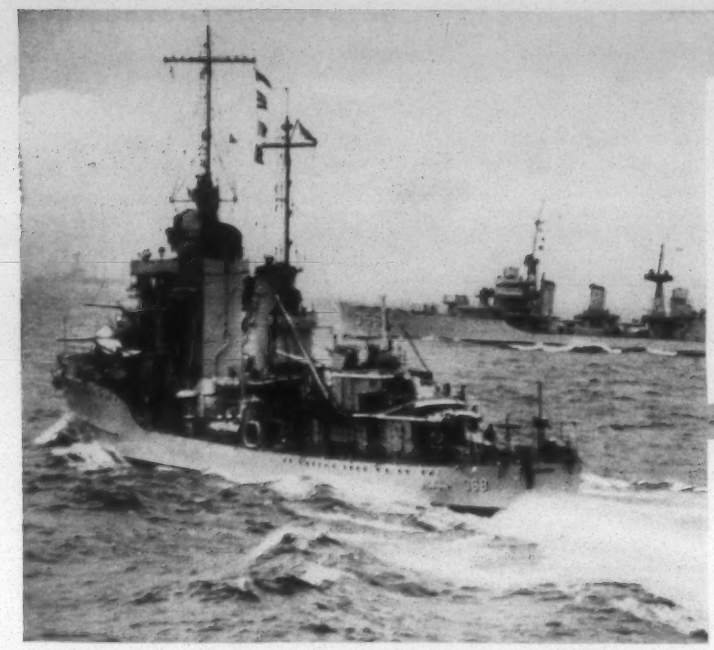
Note particularly the simple, solid one-piece construction of the combined bolster and step—eliminating all necessity of internal dampening of vibration through the use of oil. In the Atwood Spindle you use the one best oil for spindle lubrication—not vibration dampening. Longer spindle life and lower power consumption result.

For clean, uniformly twisted yarn at lowest cost per pound, you may continue to depend upon genuine ATWOOD Spindles. If you need new spindles or replacements to carry your full share of the production load, get in touch with spindle headquarters:

THE ATWOOD MACHINE COMPANY

STONINGTON CONN., U.S.A.

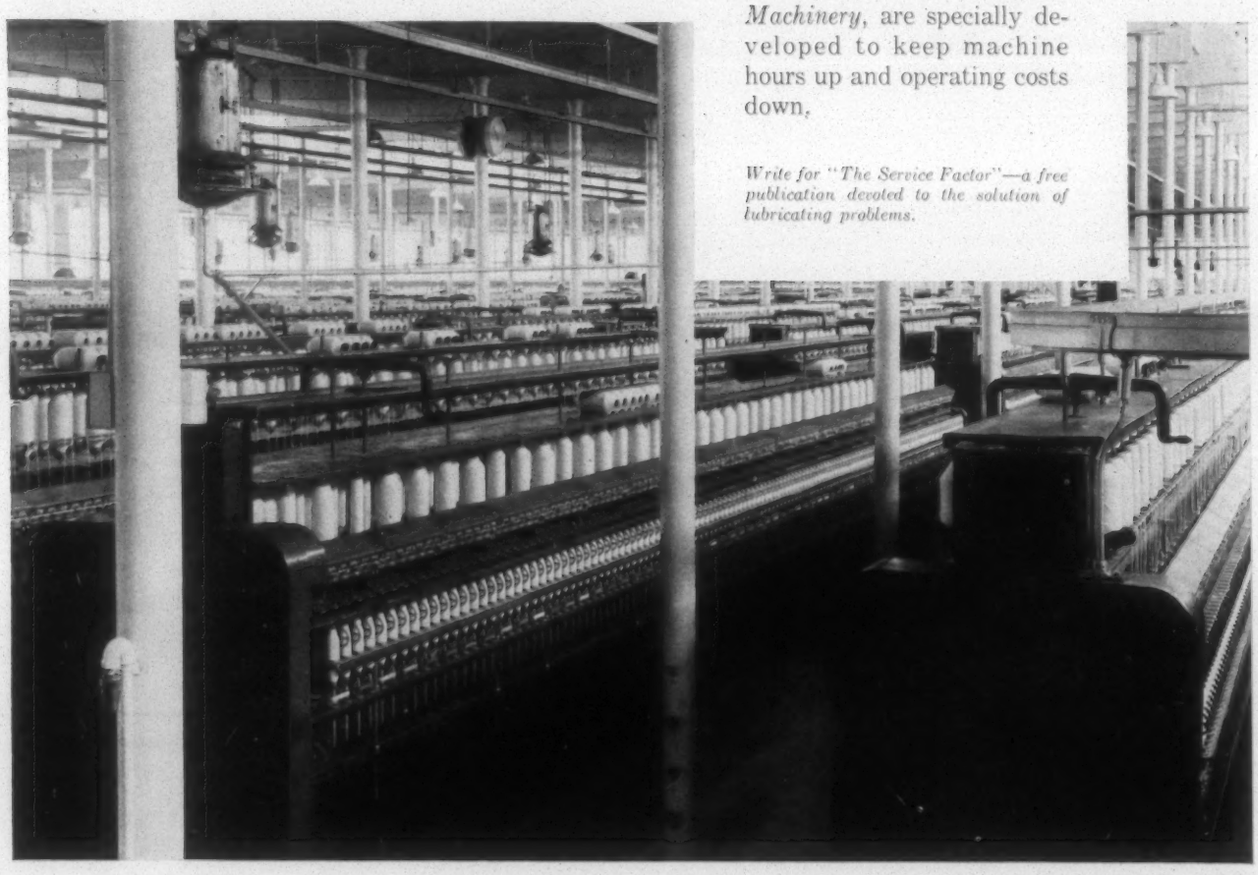
SALES OFFICES: STONINGTON • CHARLOTTE • LOS ANGELES • MANCHESTER, ENGLAND
BUENOS AIRES • SAO PAULO • MEXICO CITY
MELBOURNE • SYDNEY • BOMBAY • MADRAS



ALL-OUT WAR EFFORT demands maximum machine performance. Adequate lubrication for capacity operation of *TEXTILE MACHINERY* is afforded by . . .

. . . SINCLAIR LILY WHITE SPINDLE OILS and NO-DRIP LUBRICANTS. These, and Sinclair oils for *Knitting Machinery*, are specially developed to keep machine hours up and operating costs down.

Write for "The Service Factor"—a free publication devoted to the solution of lubricating problems.



SINCLAIR TEXTILE LUBRICANTS

FOR FULL INFORMATION OR LUBRICATION COUNSEL WRITE NEAREST SINCLAIR OFFICE

SINCLAIR REFINING COMPANY (Inc.)

2540 West Cermak Road, Chicago • 10 West 51st Street, New York City • Rialto Bldg., Kansas City • 573 West Peachtree Street, Atlanta • Fair Building, Ft. Worth

TEXTILE BULLETIN

Vol. 62 June 15, 1942 No. 8

The Effect of Cotton Control

(Editorial from Cotton Digest)

WHEN Congress voted and the President signed the Agricultural Adjustment Act, the country had on hand large supplies of good grade cotton, and domestic consumption and exports were dwindling. The price was low.

At that time it was our belief that restricting acreage, plowing up cotton, and paying farmers not to produce, was an entirely wrong concept of the situation. It was then, and is now difficult for us to reconcile ourselves to a proposition of making more by producing less.

But there was a popular demand to do something for the cotton farmer. As a matter of fact there has almost always been a political demand, and as soon as the demand to raise cotton prices was popularized, the green light was given to our law-making bodies. The result was legislation which restricted the amount of cotton each farmer could plant, unless he chose to pay a penalty that was out of all proportion to the revenue promised.

But since the AA Act was enacted great changes have taken place. Our exports of cotton have virtually ceased, but on the other hand domestic consumption of cotton has forged ahead until during April the total was nearly a million bales. The season's consumption will doubtless be well over eleven million bales.

As a result, our supplies of cotton have been drastically depleted. In fact, it is now almost impossible to purchase from farmers or primary owners any appreciable amount of good-grade cotton. True, the Government still owns considerable cotton. But much of this cotton is of poor quality, and under the law only 1,500,000 bales may be sold in any calendar year. This means that after the May sale of Government-owned cotton, which is being held this week, there will be no more Government cotton for sale, unless legislation is enacted permitting the sale. This is very doubtful.

Meanwhile, cotton of the 1941 crop went into the Government loan in excess of two million bales, but this cotton began to come out of the loan almost as fast as it entered, and has now for some time been coming out of the loan at a much faster rate than it has entered.

This is an anomalous situation. On the one hand the farmer is placing his cotton in the Government loan, even though the price he receives is no higher than he might receive in the open market. On the other hand, another farmer is repossessing the cotton he previously placed in the loan to realize on his equity, or the difference between what he obtained from the loan and the market price, less the storage and handling charges.

But the 1941 loan stocks are being rapidly picked over, and, too, the 1941 crop was of such low grade, and the loan permitted pledging so much low grade cotton, that supplies of good quality cotton from this source are rapidly drying up. The time has now arrived when mills find it virtually impossible to obtain quantities of quality cotton from any source.

Several months ago it was suggested by this publication that the time had come to let down the bars. It was our opinion then, and it is our opinion now, that there is no valid reason for retaining acreage restrictions; that these restrictions can serve no useful purpose, but do, on the other hand, work a distinct hardship upon certain cotton producers who are disposed to produce more cotton than their acreage allotment will permit.

Only recently a committee went to Washington on this question. They asked Secretary of Agriculture Wickard to increase the acreage allotments in Texas, Oklahoma, and some other States in order that farmers who were in a position to do so, could plant in excess of their allotments and take up the slack of farmers who were unable to plant their full allotment. But the Secretary of Agriculture is not disposed to change the national allotment. Although he admonished the cotton farmer some time ago to plant his entire allotment, it is becoming increasingly obvious that unless something is done the national allotment will not be reached.

The reason why the national allotment will not be obtained is quite obvious. Some producers will not be able to plant their whole allotment due to shortage of labor, weather conditions, financial difficulties and whatnot, while other producers could plant more cotton than their allotment, were they permitted to do so without penalty.

Our lawmakers, officials of the Department of Agriculture and our Chief Executive should see to it that no cot-

(*Continued on Page 52*)

The Fixing of Uniform "Per Loom Profits" Would Be Economically Unsound

IF the present program of price control is fair, cotton processors should be expected to receive a reasonably uniform percentage of profit on the cost of manufacturing various constructions of fabrics.

It might be well, however, to bear in mind that the fixing of ceiling prices which contemplates allowing a fairly uniform percentage of profit on the manufacturing cost of each fabric, does not necessarily allow a uniform profit per loom. There is a wide difference between allowing mills a uniform percentage of profit and a uniform profit per loom.

We are presenting here some data, prepared by a well known cost specialist, which shows that a uniform percentage of profit separately applied to the manufacturing costs of three different constructions of sheeting, figures out in each instance to be a different profit per loom, and that at the same per cent of profit the profit per loom increases with the coarser and declines with the finer fabrics. We presume the variation in "Per Loom Profits" would widen considerably between very coarse heavy fabrics and fine light fabrics, even of the same group.

This data is most interesting in view of the fact that the Price Administrator, in recently amending some ceiling prices, referred to the disparity in loom profits of different fabrics of the same group. We particularly have in mind the observation of the Research Institute of America to the effect that "Recent amendments of Price Schedule 23 was the result of POA's investigations which disclosed that the per loom return on seven constructions of fabrics was out of line with that of other fabrics of the same group." The Institute further says that "This is in line with the OPA's policy to equalize the per loom return of the various constructions so as to prevent any interference of price ceilings with the normal flow of production."

It would appear to us that if a uniform percentage of profit applied to different fabrics produces a different profit per loom, then conversely, a uniform amount per loom would produce different percentages of profit for each fabric.

We would conclude therefore from the data at hand that interference in the normal flow of production could be corrected not by establishing either uniform per loom profits or correcting a ceiling price covering a whole group of fabrics, but merely by extending the number of ceiling prices so as to cover a greater range of fabrics, while at the same time allowing each fabric a uniform percentage of profit on its manufacturing cost.

For the past year mills have manifested a desire to produce the coarser fabrics because by the establishment of one ceiling price to cover a whole group of fabrics, these coarser fabrics were favored in profit comparatively with the finer fabrics.

It would seem that correction lies in the direction of extending fair ceiling prices further, so as to include both the coarse and fine fabrics—not in establishing uniform per loom profits.

Data showing that with respect to each fabric a uniform percentage of profit, economically allowable on manufacturing costs, represents in each instance a different "Profit per Loom."

Narrow Sheeting	Pounds Per Loom (80 Hours)	Manufg. Cost Per Pound (Relatively Accurate)	Manufg. Profit 20% (Assumed for Illustration)	Profit Per Loom
40" 48x48 14:16 2.85 Class A	141	.11232	.02246	3.17
37" 48x48 20:19 4.00 Class B	101	.13640	.02728	2.76
36" 40x40 22:26 6.15 Class C	83	.15565	.03113	2.58

NOTE.—Manufacturing costs above are exclusive of cotton and waste.

If processors are to receive, theoretically, a uniform percentage of profit on the manufacturing cost of each fabric, *then for each fabric they would not receive the same profit per loom.*

If prices were to be regulated so as to produce the same profit per loom, *the coarser fabrics would be penalized the finer fabrics favored.*
This is true:

(A) Because the amount of preparatory machinery required to supplement any assumed loom layout is greater with respect to the coarser fabrics. This necessitates a greater profit per loom to maintain as far as possible a constant return on the amount invested.

(B) Because with respect to finer fabrics their manufacturing costs increase to a lesser extent than the production of the machine units which produce them declines. This is due to the fact that the capacity of operatives to handle a definite number of machines does not vary proportionately to their production, resulting in a lesser profit per loom.

Prepared by Frederick Moore, of Moore & Thies, Textile Cost Specialists, Charlotte, N. C.

SPECIAL

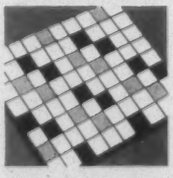
To Woolen and Worsted Manufacturers

WE INVITE YOU TO USE THIS

FOUR-PLY SERVICE!

1 FIBER RESEARCH. In our laboratories and pilot plants, scientists are constantly working to further perfect the types of rayon yarn and fiber now available, and developing special new types for specific purposes on all standard spinning systems; including the carpet, blanket, woolen, spun silk, Bradford and French worsted systems. Their latest contribution in the woolen field is "CROWN Tufton," a new type of viscose staple fiber specially adapted for floor coverings.

2 FABRIC DEVELOPMENT. A department to work with you in the design of successful fabrics—new fabrics which you can produce efficiently on your existing equipment — fabrics which combine the virtues of rayon and wool to produce the best possible effects. As a result of this cooperative research work, many successful rayon-and-wool blends have already been developed and others are on the way.



3 MILL TECHNIQUE. The Textile Unit—an experimental mill equipped with standard machinery for virtually every phase of textile production from fiber to finished fabric, to help you solve mill problems without tying up valuable plant capacity. Equipment includes standard spinning layouts, together with complete facilities for weaving, dyeing, and finishing.

4 SELLING POWER. CROWN Tested helps sell quality rayon fabrics every step of the way from raw material to ultimate consumer. Here is the way to establish and maintain the quality of your new fabrics containing CROWN Rayon, and at the same time, drive home to garment manufacturers and retailers the facts about these fabrics. Let us show you how this plan can help you.

Many woolen and worsted manufacturers are now discovering for the first time the interesting results which can be achieved with rayon staple fiber, used either independently or in blends with wool. New fabrics are appearing almost daily—in blends, weaves, and finishes made new by this versatile fiber. Amid this welter of new developments, questions are bound to arise—especially among manufacturers whose previous experience with rayon staple fiber has been limited.

It is to these new users of rayon staple fiber, as well as those who are employing it in new applications, that our FOUR-PLY SERVICE is devoted. Our ability to serve is based on the millions of pounds of fiber which we have been privileged to supply the woolen and worsted industry in recent years. Whenever you have a question involving rayon—from the properties of the fiber to the sale of finished fabrics—let us work with you toward a practical solution. We welcome every opportunity to assist you.

CROWN TESTED AND APPROVED RAYON FABRIC

AMERICAN VISCOSE CORPORATION

PRODUCERS OF CROWN RAYON YARNS AND STAPLE FIBERS

SALES OFFICES: New York, N. Y.; Charlotte, N. C.; Providence, R. I.; Philadelphia, Pa. PLANTS: Marcus Hook, Pa.; Roanoke, Va.; Parkersburg, W. Va.; Lewistown, Pa.; Meadville, Pa.; Nitro, W. Va.; Front Royal, Va.

The Importance of Good Ginning to the Spinning Industry*

By John T. Wigington, Director of Research
The Cotton-Textile Institute, Inc.

GINNERS, as a general rule, are familiar with the effects of good ginning upon the grade and staple length of cotton lint and the majority of them are familiar with recommended ginning practices. It is not the intention of this report, therefore, to discuss the causes of good and bad ginning as such, but rather their effects on cotton spinning quality and value.

Cotton quality has been defined as the properties, characteristics or attributes of the fibers which affect their usefulness. The old saying that "you cannot make a silk purse out of a sow's ear" is certainly appropriate here, for a cotton spinner cannot take a poorly ginned sample of lint and spin a smooth yarn or weave a fine fabric from it.

Ginning, in its broad sense, is the first mechanical operation to which cotton is subjected, and it is at this point that many opportunities occur for either destroying or preserving the inherent qualities of the lint. From the standpoint of the cotton spinner the quality of the ginned lint is a composite of the numerous lint and fiber properties which have an effect upon (1) the initial cost of raw material, (2) the cost of manufacturing the yarns and fabric, and (3) the quality of the yarns spun and the fabrics woven.

Ginners generally recognize the difference between good and poor lint samples and are more or less familiar with the various types of waste and foreign matter, such as particles of leaf, stalk, shale, motes, sand, seedcoat fragments, and short unspinnable fibers. They may not, however, know just how and to what extent this waste affects the spinning processes.

Taking up each of the three enumerated items in turn, the following are some of the problems encountered by the spinner.

Initial Cost

Poor ginning lowers the grade of the lint, and a poorly ginned sample usually gives in manufacture a relatively high percentage of waste material, which is more or less useless to the spinner. When the spinner purchases such cotton, therefore, he pays for an undue amount of troublesome and almost valueless matter at the prevailing rate for cotton. Of course, this price is reduced somewhat by the discount on the lower grade, but even so, such waste material is expensive at any cost. When confronted with the problem of wasty and trashy cotton, the spinner has the choice of either increasing the cost of his production by processing the cotton through additional cleaning equipment, or of reducing the quality of his finished product. In some cases it may be a combination of both.

Cost of Manufacturing

Foreign matter and short fiber must first be removed from the good cotton before any satisfactory product can be obtained. Every ginner knows that, unless he first cleans his seed cotton, he cannot produce a good sample of lint cotton. The spinner faces a similar problem when he encounters a wasty and trashy lint cotton. Such cottons require extra cleaning, which involves the increased use of machinery, power, and labor, thus raising the manufacturing cost.

Such extra cleaning operations further increase the hazard of damage to the fibers. This may introduce additional waste matter in the form of an increased amount of short unspinnable fibers, or in the undue formation of naps and neps, which may not have been originally present in the raw cotton. As cleaning is not 100 per cent efficient, some foreign matter is carried through the entire series of processes. The presence of such undesirable elements causes unevenness in the product of successive manufacturing machines.

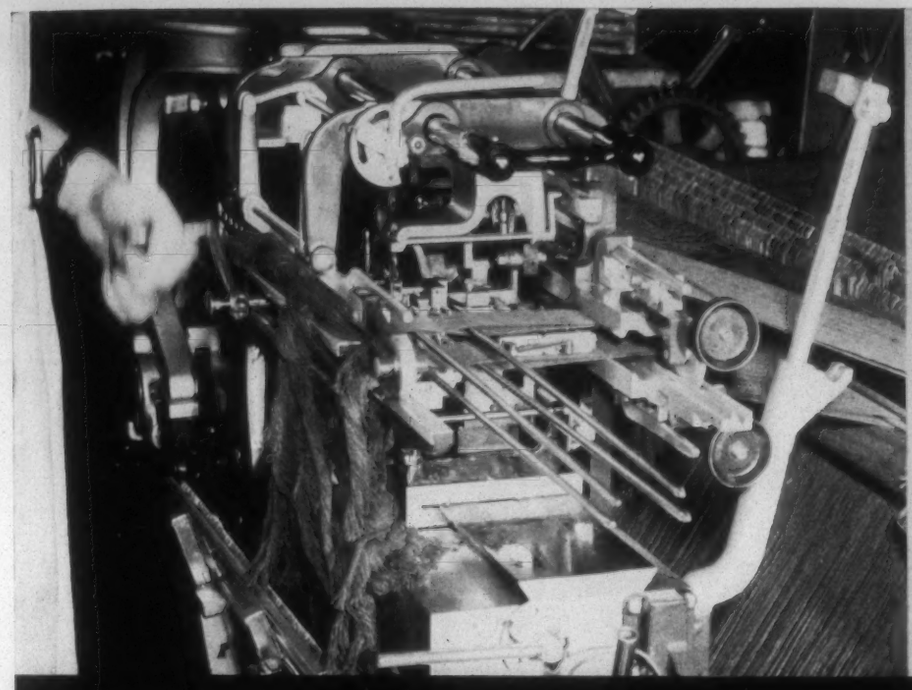
The presence of neps, naps and particles of waste has a tendency to cause breakage of the strands of cotton in the mill as the material is carried through the various processes. Naturally these end breakages must be repaired, and in some cases this means complete stoppage of the machine. In others it may mean only the attention of the operator to "piece up" or join the broken ends while the machine continues running. In either event, however, it may mean the need for more operators, for a poorly running material requires more attention than one with a low end breakage. Production costs are thus further raised.

In the classification of cotton, grade is determined on a basis of leaf, color and preparation, the latter of which is, to a large extent, controlled by the quality of ginning. Properly ginned cotton is relatively smooth in appearance and free of naps and neps, which is an advantage to the spinner not only from the standpoint of cost of manufacture, as previously considered, but also as regards the quality of the grey and finished goods. This quality phase of the problem, however, will be discussed in greater detail later.

Poor ginning as reflected in very rough or gin-cut holes is often the result of ginning green, damp or wet seed cotton without drying at the gin and with a tight seed roll,

(*Continued on Page 47*)

*Address before the North Carolina Ginners' Association, Charlotte, N. C., May 4, 1942.



BARBER-COLMAN

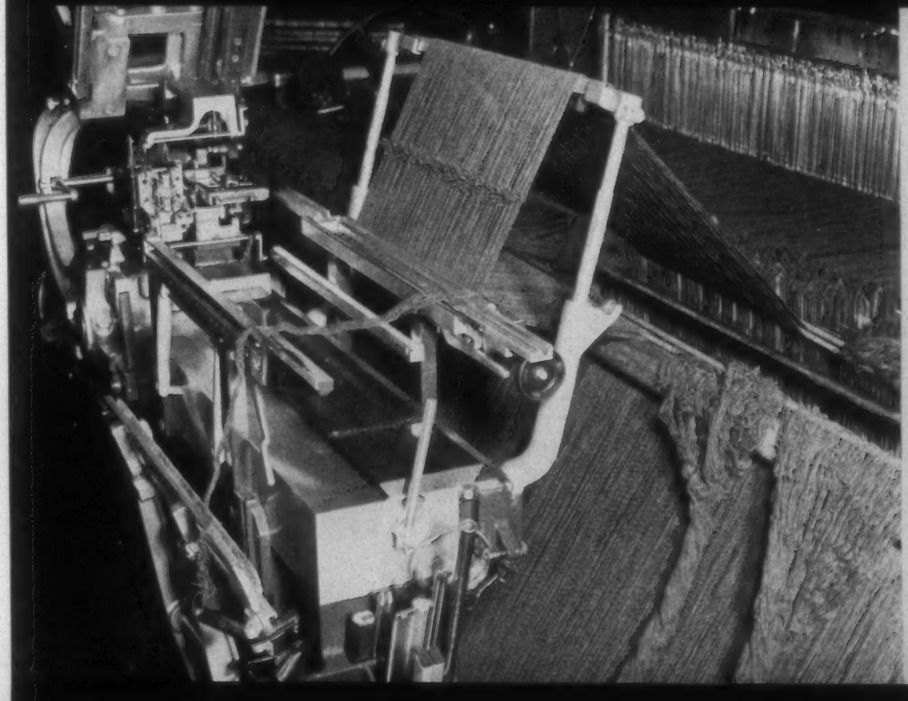
Portable

WARP TYING MACHINE

MODEL "LS"

WOOL WARPS...TIED IN AT THE LOOM

LOW COST WARP REPLENISHMENT - HIGHEST QUALITY RESULTS



The upper picture shows the Model "LS" Warp Tying Machine in action on a "bite", or portion, of a wool warp. In the lower picture, the bite has been completely tied and is about to be cast off. Note the next bites separated, ready to be put in the machine, which is fully portable and operates in the narrow alley directly behind the loom.

BARBER-COLMAN COMPANY

ROCKFORD, ILLINOIS, U. S. A.

FRAMINGHAM, MASS., U. S. A. • GREENVILLE, S. C., U. S. A. • MANCHESTER, ENGLAND • MUNICH, GERMANY

Reminiscences of

YE OLDE COTTON FACTORY

By
I. K. EDWARDS
Part Five

OF the many outstanding characteristics of the old time Southerner one of the most frequently employed was thoroughness.

If a job was not finished up in perfectly 100 per cent style it was so much time wasted.

Notwithstanding the limited engineering experience, the determination to establish a mill in any certain locality by a sufficient number of citizens was eventually brought to a decision, plans worked out and all available talent was put to work and soon a brand new mill equipped with a complete yarn and cloth making outfit, all of the very best quality materials and workmanship obtainable.

During the '90s this "new mill" interest grew to such proportions that outside capital became attracted and representatives of investors became quite agreeably impressed with the possibilities in an area which had not heretofore won a great deal of recognition in a business way.

But a new day had dawned. Markets began to open; instead of yarn and cloth being hauled from the mill to the railroad freight depot in horse-drawn "drays" the railroads started building spur tracks to the mills to prepare for car loadings. Instead of the 5,000-spindle 100-loom mill costing around $20,000 to $100,000, they went up to 20,000 to 30,000 spindles, 400 to 600 looms with cost in proportion. No longer was cotton being bought here and there a few bales in a lot, but ample warehouse space was built for storing an entire season's supply. This arrangement enabled the cotton grower to improve his grades and also it offered him much better marketing facilities.

One of the highest tributes to the Southern textile industry is the splendid record of management and accomplishment of the man responsible for the "whole works," viz., the "Big Boss." How he ever endured the tremendous responsibilities and the huge mountain of ever increasing problems arising with the new situation, what, with buying cotton in a constantly fluctuating market, selling cloth under the same conditions, sometimes short on working capital, payrolls and other expense items, dull markets against obligations to keep the mill running, conditions varying day by day, yet, in the face of the most trying situations he could be found at his desk when everybody but the watchman had long ago gone to sleep, figuring, planning against apparently insurmountable odds. Then an idea! Can he put the deal through? He reaches for the telephone. "Give me an open line to Jim's office in the city." After a nerve-racking wait he is told he must go in person. Long past midnight he calls the railroad: "Give me a one-car train to the 'big city' and return; start in 30 minutes, a clear track, non-stop run." Big order? Well, he starts a few minutes late, but he's off. The fate of a big corporation, the livelihood of hundreds of workers and their families, and all the business relationships are at stake. Time drags. He finally arrives, just in time to make the deal; only take a few minutes, sign a few papers, then start back home; no time for amusement or rest. Arrived at last, back at the office; everybody talking in whispers. The "Old Man's" back! Soon the news breaks. Everything is all right.

Just another episode in the busy, hardest working, hardest fighting, hardest enduring life—one hair-raising ordeal. Often another of these "Old Boys" pulled out of tight spots as fast as they came, and the high percentage of surviving, healthy, progressive Southern textile mills of today attest the unquestionable high type of business integrity of every one of them—an achievement that is priceless in the industrial world.

One early spring day in the year 1887, a green, timid, gawky country boy who had, a few months earlier with his parents and four younger children, moved to the city seeking a way to improve the family living standard. Being in the early 'teens and of an adventurous nature and somewhat observant, he had spent his time wandering about the streets, gazing with wonder at the "great, high" (three-story) buildings, the big two-horse and four-horse carriages (hotel omnibus), listening to the wild yells of the teamsters and the deafening roar of numbers of heavy "drays" rumbling over the granite block paved streets and, wonder of wonders, watching men and boys riding on the top of wheels almost as high as a man's head, with a little wheel about knee-high following along behind (old bicycle). Then some days it looked like all the horses and wagons, buggies and what not in the whole world had come to town.

After these months of introduction to the new environment he was attracted to the musical humming of the "cotton factory," which was nearby. Losing no time seeing the spinning room boss (overseer) and the sweeper being out on sick leave, the new boy was duly installed as sweeper in the spinning room.

Strangely enough, he soon became able to doff and climbed to the rank of a full fledged doffer boy. In a few weeks he was transferred to the twister room. One day, while doffing a frame, the boss came along, accompanied by a big husky boy (also from the country) and, without any loss of time or waste of words, he simply said: "Learn this boy to doff" and he was gone. The two boys stood for a moment sizing up each other, then the doffer spoke:

(*Continued on Page 50*)

Ceiling Prices On Cotton Waste

A ceiling upon all grades of cotton mill waste has been announced by the OPA. Ceiling price on each grade is to be the highest price paid for such grade during March, 1942.

Dewey Carter Heads Gaston Legion Post

A. Dewey Carter, head of A. B. Carter, Inc., with textile interests in Gastonia and Lincolnton, N. C., has just been inducted into office as commander of the Gaston Post No. 23 of the American Legion.

Brewerton Enlarges Shop

E. H. Brewerton, electro plater, of Greenville, S. C., announces that he has enlarged his shop, and has installed additional equipment, to take care of his rapidly growing business.

Mr. Brewerton says that with these added facilities, he is now able to handle promptly, any kind of plating work.

W. K. Dana Joins Textile Machinery Division Of WPB

Saco, Me.—W. K. Dana, of the Saco-Lowell Shops, has gone to Washington to be an assistant to R. S. Dempsey, head of the Textile Machinery Division of the War Production Board.

Mr. Dana is the son of Philip Dana, treasurer of the Dana Warp Mills at Westbrook. Before becoming associated with the Saco-Lowell Shops, he was assistant superintendent of the Laurens Cotton Mills.

State of Alabama Gets Bust of Late Gov. B. B. Comer

Montgomery, Ala.—A bronze bust of the late Gov. B. B. Comer, Alabama's chief executive from 1907-1911, was presented to the State Department of Archives and History by members of his family. The presentation was made by Donald Comer, son of the former Governor.

The bust is the work of Julian Harris, Georgia sculptor.

Auburn Chapter of Phi Psi Elects

Auburn, Ala.—The Alabama Polytechnic Institute chapter of Phi Psi, national honorary textile fraternity, recently elected the following students to membership: Kenneth H. Thomas, pre-junior, Columbus, Ga.; John W. Flatt, junior, Americus, Ga.; Lennon E. Bowen, Jr., sophomore, Tifton, Ga.; Piper M. Osborne, sophomore, Lanett, Ala. The new honorary member tapped was Paul W. Bolen, president, Dusseldorg Chemical Co., Savannah, Ga.

New officers for the coming year were elected as follows: Billy Duncan, president; Marvin Griffin, Lanett, vice-president; Mayoh H. Newton, Loachopoka, secretary; Warren Weisz, Montgomery, treasurer.

Hightower Heads Georgia Mill Men

Election of Julian T. Hightower, Jr., of Thomaston, as president, and adoption of important resolutions featured the session of the Georgia Cotton Manufacturers' Association Association in Atlanta May 29th-30th.

Speakers May 30th were United States Senator Richard B. Russell; George P. Swift, retiring president; Charles A. Collier, vice-president of the Georgia Power Co., and Frank Constangy, regional attorney for the United States Social Security Board.

Mr. Hightower, the new president, was elevated from the vice-presidency. He is vice-president of the Thomaston Cotton Mill.

Guy Parmenter, superintendent of the Goodyear Clearwater Mills No. 3, at Atco, former treasurer, was elected vice-president.

H. O. Ball, manager of the Pepperell Mill at Jackson, was elected treasurer, and T. M. Forbes, of Atlanta, was re-elected secretary.

Elected directors for terms expiring in 1945 were: A. A. Drake, Jr., vice-president of the Bibb Mills, Macon; R. D. Harvey, agent of the Pepperell Mills, Lindale; L. G. Hardman, Jr., president Harmony Grove Mills, Commerce, and Harold Wetherbee, vice-president of Flint River Mills, Albany.

One of the resolutions adopted asked that provisions be made in pending tax legislation for adequate depreciation in machines due to heavy operating schedules.

Another asked the Office of Defense Transportation to rule that cotton shipped into Southern mills from the West be held to 35,000 pounds carload minimum when uncompressed and that a 62,500-pound carload minimum for standard density be established as an emergency measure for the duration of the war.

Senator Russell discussed the war effort and the part played in it by the textile industry, declaring:

"You have done a magnificent job and have done it on your own resources.

"So far as I know, the textile industry is the only major industry to travel on its own steam without seeking governmental assistance."

The turning point of the war, Senator Russell said, will come when this country is able to produce the ships needed to insure movement of supplies and men to the battle front.

"But in our great task we must not become so war weary that we lay down the responsibilities of the peace," he added.

"There can be no negotiated peace. We must fight to the bitter end, and then fix it so that not for all the generations to come can a man such as Hitler rise to harass the world."

Mr. Collier told the manufacturers that Georgia is not faced with the problem of power rationing this year unless unforeseen difficulties arise.

From January 1st to May 21st in the most important watershed in northeast Georgia the rainfall has been 20.67 inches as compared to 14.26 inches in the corresponding period last year, an increase of 108 per cent, Mr. Collier explained.

Mr. Constangy discussed the Georgia unemployment compensation law and urged the manufacturers to give it their full support.

Card Speeds, Maintenance, Conversion, On Program of Eastern Carolina Group

THE Eastern Carolina Division of the Southern Textile Association held its spring meeting on Saturday morning, May 9, 1942, at the North Carolina State College Textile School, Raleigh, N. C., beginning at 10 o'clock. The chairman of the Division, George Gilliam, Superintendent, Sterling Cotton Mills, Inc., Franklinton, N. C., presided.

The first part of this discussion consisted almost entirely of a report by A. R. Marley, superintendent of Mill No. 1, Erwin Cotton Mills Co., Durham, N. C., on the results of increased card speeds. George Gilliam, superintendent of Sterling Cotton Mills, Franklinton, N. C., chairman of the division, presided, and the discussion continues here on the question of increased carding speeds.

Chairman Gilliam: Mr. Cates, have you had any experience along that line?

J. W. Cates, Supt., Edenton Cotton Mills, Edenton, N. C.: No, sir. I have thought about it right much.

Chairman: Have you plenty of cards?

Mr. Cates: I am still sticking to the same old speed.

Chairman Gilliam: Is your card production about the same as it has been all along?

Mr. Cates: Yes. The thing I am interested in is whether the speed of the card has anything to do with the life of the foundation, flooring, etc., in your mill.

Chairman: Well, it might; I do not know.

Mr. Cates: I did not get here in time to hear the settings.

Mr. Marley: We left them the same. We did not change them.

Mr. Cates: If you produce as good quality of product and get more production and do not injure the clothing or cause the machinery to be affected, I do not see why it would not be a good thing.

Chairman Gilliam: Has anyone else anything to say on this subject? What has been your experience, Mr. Finley?

L. C. Finley, Supt., Pilot Cotton Mills Co., Raleigh: We find our breaking strength about the same, and it seems that it cleans a little better. As to the waste, we have not gone into that yet.

Chairman: How about it, Mr. Moore? What did you find?

G. E. Moore, Supt., J. M. Odell Mfg. Co., Bynum, N. C.: We speeded up a little bit—not quite as much as the others did. It has cost us a little something, though. Most of us know we have to forget costs now.

Chairman: You needed the production?

Mr. Moore: Yes, sir. I do not think it has cost us any more per pound than it did before. We speeded up one card to see what it was going to do. It looked as if it was not going to ruin it, so we went ahead and speeded up all of them. I do not see any difference.

Chairman Gilliam: You are satisfied with yours?

Mr. Moore: Yes, sir. I see very little difference, except that we get a little more production. We have not changed anything except the cylinder speed. With excessive speed on there, though, I do not think it would be a good thing in the long run. It may last us to get over this little spell, but some day we may regret it. I am just a little bit skeptical about it. We are going by weight, though, and I do not see any difference in the results. The strips are about the same. The waste to go back in the lap room is just about as much as it was before.

Mr. Marley: What is your speed?

Mr. Moore: About 182, average.

Mr. Marley: Did you leave the other speeds the same?

Mr. Moore: Left everything the same; we did not change anything except the speed of the cylinder. The comb is running just a little bit too fast. I think it would be better if we could cut a little off that. As the cylinder speed went up the other parts increased in proportion.

Mr. Marley: In other words, your other speeds changed in proportion with the cylinder?

Mr. Moore: Yes, sir. We left everything the same.

Chairman Gilliam: We have taken up right much time on that, and I think we had better go on to the next question. *"What methods are used in reclaiming or replacing broken parts?"* Mr. Benson is going to talk on that, I believe. We shall be glad to hear from you, Mr. Benson, on this important matter.

Reclaiming or Replacing Broken Parts

D. M. Benson, Asst. Master Mechanic, Erwin Cotton Mills Co., Durham: When I got Mr. McDowell's letter informing me that I was to work on this program today I

(*Continued on Page 42*)

WHEN YOU NEED "MINUTE MAN" SERVICE ON REEDS

When minutes count—and when you want to get the most out of your loom harness equipment — call your nearest Emmons representative.

OR WRITE

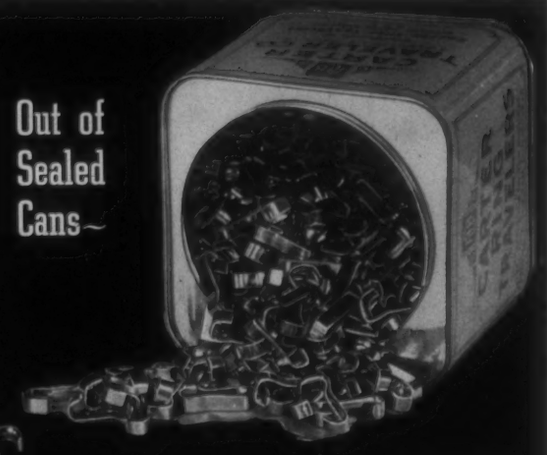
Box 2036

Long-lasting, top-quality Emmons Reeds are manufactured at Charlotte. Other Emmons products, standard sizes of flat heddles, heddle bar stock, and heddle frame repair parts are kept in stock.

Emmons representatives are practical mill men. They are ready to serve you.

EMMONS
LOOM HARNESS COMPANY
CHARLOTTE, N. C.
LAWRENCE, MASS.

See latest TEXTILE WORLD YEARBOOK for details on all Emmons products



ALL ALIKE

Untouched by human hands, Carter Travelers are doing a job these days wherever textile production is straining to meet the demands of our country at war.

There is no room—there is no time—for mechanical failures.

It is with this thought foremost in the minds of our super-skilled organization, that every Carter Traveler is produced.

It is the best way we can do our part.

CARTER TRAVELER COMPANY
DIVISION OF
A. B. CARTER, INC.
GASTONIA, N. C.

SALES REPRESENTATIVES

R. D. HUGHES SALES CO., 2106 S. LAMAR STREET, DALLAS, TEXAS
Eastern (Including Canada) C. E. HERRICK, 44 FRANKLIN STREET, PROVIDENCE, RHODE ISLAND
European: MELLOR, BROMLEY & CO., LTD., LEICESTER, ENGLAND
Mexico: LEO LENK, APARTADO NO. 533, MEXICO CITY, D. F.

The E. H. Jacobs Manufacturing Corp.

By DAVID CLARK

WE admire the man, or the firm, who is progressive and is always striving to make a better product or to have a better plant or better equipment for the manufacture of the product which it sells.

The Charlotte plant of The E. H. Jacobs Mfg. Corp., under the management of W. Irving Bullard, can truly be classed as progressive in character.

A few years ago, I wrote a description of the plant they had established in a section of the former Elizabeth Mills in Charlotte. It was a good plant and they were turning out excellent picker sticks, lug straps, skewers, etc., but Mr. Bullard was not nearly as well satisfied as his customers and last week I visited his entirely new plant upon the road from Charlotte to Pineville and Rock Hill and marveled at the improvements which had been made.

350,000 Picker Stick Blanks Stored for Air Drying

The new plant not only has a capacity of more than twice that of the old plant but is located upon a 16-acre plot with ample facilities for future expansion.

The main building has 10,000 square feet of floor space but there are also warehouses and a dry kiln. There is a water system with a deep well and five houses for employees have already been built. The architect was Louis H. Asbury, of Charlotte, but he was assisted in the engineering by the assistant treasurer of the corporation, L. L. Froneberger, a graduate of N. C. State College.

The first building I entered was a warehouse designed for the air drying of hickory and dogwood. The E. H. Jacobs Mfg. Corp. believes that air dried hickory makes the best picker sticks because it is the most natural process. The hickory comes largely from western North Carolina and east Tennessee and is in blocks slightly larger than the finished picker stick. The blocks are stacked so that air can circulate freely and are left in the warehouse from five to seven months. An interior view of the warehouse is shown on this page. There were about 350,000 picker stick blocks stored when I was there.

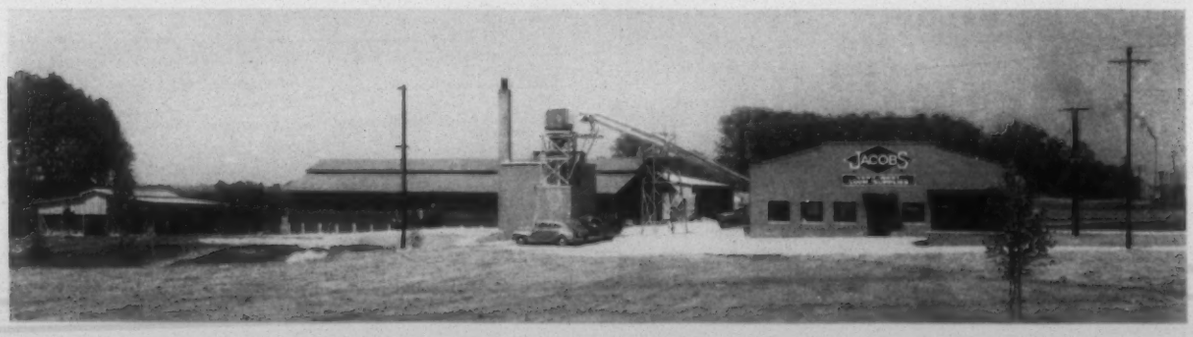
In another shed, at the rear, were more than 500,000 blocks about 40x1x1 which were to be used for skewer stock. Some of the skewer stock is kiln dried.

The kiln which they have constructed a short distance from the main building not only has a very large capacity but is the last word in dry kilns. It has automatic regulation of both heat and humidity and has recording disks for records of both.

While Mr. Bullard was showing me the kiln, we were joined by the superintendent, J. E. Pearson, who with his son, Everett Pearson, as assistant, operates the plant.

Mr. Pearson was evidently very proud of the dry kiln and insisted upon my going to the control room where he showed me the control devices and the recording disks which showed the uniform control.

While all picker sticks are made from air dried hickory, The E. H. Jacobs Mfg. Corp. does use considerable dogwood and maple and much of it is kiln dried. Skewers usually have a hickory spindle with a dogwood base.



New Plant of the E. H. Jacobs Mfg. Corp. at Charlotte, N. C.

Office of E. H. Jacobs Mfg. Corp.

One thing I noticed, upon entering the main or shop building, was that there was ample room around every machine and that nowhere was there any crowding. Its layout was so designed that every workman had ample daylight upon his machine.

One machine saws both ends of the block at the same time and there are planing machines which plane two sides as the block passes through. These are examples of the efficiency and labor-saving machines with which the plant is equipped.

Machines shape binder sides automatically and there are several different types of sanding machines with which smooth surfaces are produced. There are disk sanders, belt sanders and some small parts are placed in a revolving drum with bits of sand paper. Supt. J. E. Pearson is shown at a disk sander.

In a separate room two colored men were making skewers. One is shown making the spindles out of hickory while another was turning out skewer heads from dogwood. Both had machines which operated at a very high rate of production. The block of wood is inserted with the left hand and a lever which is pulled with the right hand brings the cutting knife against the revolving block and produces the part with only one cut required. The two men make about 4,000 skewers per day.

Another man was driving fiber bearings into binders made of ash and dogwood. Dogwood binders were considered to be the best.

Shaping Binders

Supt. Pearson at Disk Sander

One picture shows a man grading picker sticks and stamping those which came up to the standard of The E. H. Jacobs Mfg. Corp. He not only discarded many which showed defects in the wood but I was surprised to learn that because of conditions of growth some hickory, which looks very good is light. The grader hand weighs every picker stick and through experience can easily detect those which do not have standard weight. He allowed me to feel some very good looking picker sticks which had been thrown out and I was surprised at their lightness. About 18 per cent of the finished picker sticks are found to be below the standard set by The E. H. Jacobs Mfg. Corp. and they are sold to surveyors to be used as markers.

Not only was there a large store room for finished goods but due to the very many types and sizes of looms, each requiring a different size picker stick or binder, The E. H. Jacobs Mfg. Corp. has to maintain a large sample room. A sample from every order is carefully marked and filed and is available when reorders are received. They also have a modern system of production schedules.

Modern and well equipped locker rooms are provided and have shower baths. There are separate locker rooms and baths for the negro employees.

The main shop building is equipped with unit heaters for the winter time but can be thrown wide open for the summer season and has splendid ventilation. All the shavings and dust are removed by a very complete blower system which delivers them to the boilers.

Making Skewer Spindles

Grading Picker Sticks

The office is not large but is ample. The office picture shows President W. Irving Bullard at one desk, talking to a visitor, W. P. Hatch, of the Factory Mutuals, Boston, Mass.; Office Manager, L. B. Pitts, at desk in corner, and Miss Katherine Couch at the telephone. L. L. Froneberger was in the mountains, checking on additional supplies of hardwood.

The entire new plant of the E. H. Jacobs Mfg. Corp. is a model of efficiency and it was evident that when, and if, improved methods of handling hard woods are developed they will be among the first to adopt them.

Their products showed that quality was given first consideration and that great care was taken to see that no product, which had any defect, was allowed to leave the plant.

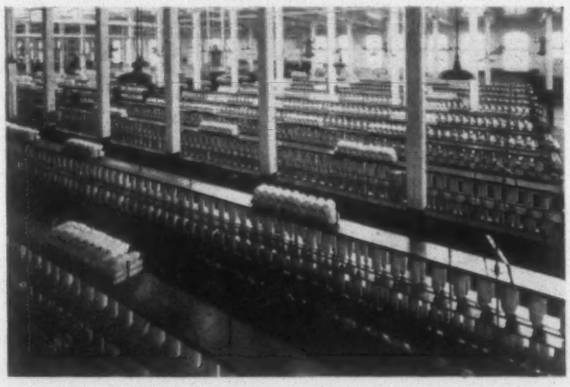
It was gratifying to learn that The E. H. Jacobs Mfg. Corp. had advanced so rapidly in recent years that they now rank second in the manufacture of hardwood equipment and replacement parts for the textile industry.

Let's Streamline Our Jobs – Spinning Fixing

By E. L. KING

PREVAILING conditions are forcing mills more and more to try a variety of new methods of textile manufacture. Rising labor cost, ceiling prices, fluctuation of the cotton market, shortage of labor and numerous restrictions are some of the causes for the trend. Then too, manufacturers realize that their mill's survival in a post-war economy where the toughest competition will have to be met will be more or less determined by their ability to get the maximum amount of efficiency from their machines and employees.

After the war-contracts are gone there will be a mad scramble for markets and the mills geared to meet the



highly competitive conditions will be the ones to survive and offer their employees a regular weekly pay-check.

Gone, or at least fast going, are the days when a spinning fixer's job consisted of a certain number of frames to fix, supervising and training the help, and changing the number of yarns. The training of new help and general supervising of employees has now become recognized by more efficient mills as a full time job which should have a responsible supervisor in charge. In order to insure a constant diameter of thread with the necessary twist a number of mills now have all of the changing of the yarn numbers left to the laboratory. This leaves only the actual fixing for the section man. In many such cases spinning room overseers are racking their brains in an effort to give the fixer a full time job and to conserve supplies by getting the full life from each part. Many methods are being tried in various plants with degrees of success. The purpose of this article is to give the reader a program that has proved successful in mills where it has been tried.

In conserving workers and materials, plus a forward outlook on developments are are bound to occur in the future, we must have all of our programs inaugurated with long range planning. We are going to have to analyze not only "Fixing" but every job in the department. We are going to have to break down each job from the whole into smaller units and devise methods whereby a careful check can be made on every operation.

This may mean a complete revision of the payroll system markings, wherein a spinner as listed on the payroll does all of the manipulations of getting up ends, creeling and cleaning; doffers running out the boxes, dumping yarn, piecing-up and doffing. We may, due to the labor shortage and other factors, have to train people for one operation only, such as is now in use in the automobile industry.

However, in this article we are only concerned with spinning section men. They are the "key men" in the department and if they are not properly sold on the program they can break it or make it, as they wish. Also they would be instrumental in reorganizing any other jobs that are necessary.

Sell Program To All Concerned

In order that we may get the most production from our frames it is necessary that a clear understanding of what is desired be known to the superintendent, the overseer, room foreman and section man. Once a clear-cut policy is decided upon then it should be sold to every one in the department concerned. Everybody should know the reason for the change of the program and the expected result.

In changing our method of fixing in the spinning room, several things will have to be worked out by the overseer

even after the program has been completely sold. In other words, everything should be worked out in detail.

The first thing would be to have built, in the carpenter shop, a portable work bench, equipped with a vice, drawers, compartments, etc., that can be rolled from one frame to another as the work progresses. Second, it should be equipped with all necessary supplies, a complete assortment so that only a minimum number of trips will have to be made to the supply room for supplies. Third, the fixer should be relieved of all supervisory duties. Fourth, by several conferences between the fixer, overseer and room foreman he should learn and clearly understand his

(*Continued on Page 36*)

PROCTOR

Package Yarn **DRYER**

- This Proctor Dryer is used for drying yarn that has been dyed in package form.
- Properly conditioned air is impinged on the packages in an intense and concentrated stream in such a manner that the vapor pressure inside each package is raised to a point where the moisture is forced to the outside surface.
- An ingenious feature automatically reverses the direction of air flow at timed intervals so that the air impinges on the packages, first from one direction, then the opposite.
- The new Proctor Package Yarn Dryer gives operating ease because of its mechanical simplicity . . . drying is speedy and exceedingly economical . . . maximum output is possible in a minimum of floor space.

PROCTOR & SCHWARTZ · INC · PHILADELPHIA

Illustration Shows a Few of the Different Straps Manufactured By Us

All of our textile leathers are manufactured from Oak Tan and Hairon Leather. Our Oak Tan Leathers are made from packer hides, selected for substance, weight and fibre strength. Our Hairon Leathers are made from foreign hides that are selected for textile purposes and are especially adapted for this work, owing to the extra length of the fibres.

We manufacture all types of textile leathers for cotton, woolen, worsted, silk and rayon looms.

Bancroft Belting Co.

145 High St. Boston, Mass.

Warehouse and Southern Distributor
CAROLINA SUPPLY CO.
Greenville, S. C.

ONYX

ONYX TEXTILE PROCESSING PRODUCTS MEET WAR TIME NEEDS

Today, routines in the processing and finishing of textiles are changed overnight. Materials and methods are subjected to sudden changes and drastic withdrawals because of our country's war efforts. Onyx Textile Processing and Finishing Products for all available fibers cover a range wide enough to meet conditions governing raw materials, production, market conditions and government regulations. To textile manufacturers confronted with war time finishing problems, Onyx chemists and technicians are available for consultation and real, practical help. Leading textile mills have been aided considerably by Onyx Processing Products. Why not learn what they may do for you?

INVEST IN WAR SAVINGS BONDS AND STAMPS TODAY AND EVERY DAY.

ONYX OIL & CHEMICAL COMPANY
JERSEY CITY, N. J.

New England Office: 511 Westminster Street, Providence, R. I.
Charlotte Office: 121 East Third Street, Charlotte, N. C.
Mid-Western Representatives:
Maher Color & Chemical Co., Chicago, Ill.; Los Angeles, Calif.
In Canada:
Onyx Oil & Chemical Co., Ltd., Montreal, P. Q., Toronto, Ont.

onyx

K. M. Slocum is Made Regional Manager Tide Water Oil Co.

K. M. Slocum has been appointed regional sales manager of the Southeastern district for the Tide water Associated Oil Co., to succeed R. H. Mariner, who is now a lieutenant in the Naval Air Service, at Weymouth, Mass. He will make his office at the headquarters for the Piedmont section which are located in Charlotte, at 122 South Boulevard.

Mr. Slocum is a native of Providence, R. I., and a graduate engineer of R. I. State College. He has been with the company since 1926, covering southeastern Massachusetts and the State of Rhode Island on the sales of industrial lubricants.

"Share-a-Ride" Club Movement Is Launched

With the organization of the first "Share-a-Ride" club in Spartanburg, S. C., last week, a movement has been launched that may become national in scope, and should be a valuable contribution to the war effort as well as a practical solution to the serious problem with which traveling men are faced because of the rubber shortage and gas rationing.

The "Share-a-Ride club idea was originated by Fritz Zweifel, of Spartanburg, Southern representative for the H & B American Machine Co., and Mr. Zweifel has been the leader in organizing the club in that city. Briefly, the plan is to pool automobiles of men who travel, work out itineraries, and otherwise arrange so that two or more men may use one car in covering the same routes.

Membership is not confined to traveling salesmen, but also is open to sales managers, engineers and others who must cover territories outside the city. No membership fee is to be charged according to initial plans. Data cards, giving the member's name, address, occupation, territory covered and other information, will be kept on file at the club's headquarters, which will act as a "clearing house" in arranging the "share-a-ride" trips.

The movement has been assured hearty co-operation and has been enthusiastically endorsed by public officials and leading citizens of Spartanburg, including: Leon Henderson, Administrator, Office of Price Administration, Washington, who telegraphed commendation; Gov. R. M. Jefferies; Dr. William P. Jacobs, of Clinton, chairman, South Carolina Council for Defense and executive vice-president, Cotton Manufacturers' Association of South Carolina; Heyward Mahon, Greenville, director, State Defense Council and former Congressman, and others.

All emphasized the importance of conserving rubber and praised the initiative and patriotism of Spartans in launching the movement.

Traveling men in other cities who are interested in organizing "Share-a-Ride" clubs may secure full information by writing to Mr. Zweifel.

John P. Maguire Regional Director of WPB for N. Y. and Northern N. J.

Appointment of John P. Maguire, president of the John P. Maguire Co., commercial textile factors of New York, as Regional Director of the War Production Board for New York State and northern New Jersey, has been announced. Mr. Maguire assumed his duties May 18th.

Establishment of a regional office in New York is part of the War Production Board's policy to decentralize operations. Under a recent order of the chairman, all field offices of the WPB have been made directly responsible to the regional offices. This process of decentralization was designed to put the operations of the WPB on a local level, enabling business men to conduct their Government contacts in cities near their homes as much as possible.

Mr. Maguire, a resident of East Orange, N. J., began his career in banking in 1911 with the First National Bank of the City of New York. Later he became an officer of the Liberty National Bank of New York, and in 1919, operating head of Textile Banking Co. In 1936, he organized the John P. Maguire Co., Inc. He has accepted appointment to the War Production Board on a dollar-a-year basis.

Mr. Maguire now serves as a director of the Manufacturers' Trust Co., Cluett, Peabody & Co., the Botany Worsted Mills, Atlantic Gulf and West Indies Steamship Lines, and Stern Bros.

L. E. Leverone, Stein-Hall Long Time Employee, Retires

Frank Griswold Hall, president of Stein, Hall & Co., Inc., New York, and Stein, Hall Mfg. Co., Chicago, manufacturers and distributors of starches, gums and dextrines, has announced the retirement of Louis E. Leverone as general manager of the Chicago company.

Mr. Leverone, who has been associated with the company for 30 years, will continue as a vice-president, and at his request retires from the position of general manager in order to devote most of his time to his many civic and other duties. He is president of the Illinois Chamber of Commerce and of the Northwestern University Settlement in Chicago, and is active in the Dartmouth Club and other organizations in that city.

D. M. Hawley, who was appointed production director for all Stein-Hall affiliated companies some time ago, has been elected general manager and vice-president of the Chicago company, with Walter H. Hart as assistant general manager. Mr. Hart is also secretary of the Chicago company.

Edward Butts, Jr., sales manager for the New York company, is now general sales manager for both the Chicago and New York companies.

J. P. Strasser, head of the paper department, has been appointed assistant sasles manager at Chicago.

Dr. Alexander Frieden continues as technical director for both companies at the New York office, and Jordan V. Bauer, of the Chicago company, has been appointed assistant technical director.

Organized in 1866, Stein-Hall celebrated its 75th anniversary last year. The 50th anniversary of Mr. Hall's service was observed two years ago.

HOW TO MAKE YOUR LEATHER BELTS LAST LONGER!

1. Be sure the belt is engineered to the job. An under-belted drive wears out the belt before its time. Be sure to allow for proper safety factor.

2. Check the laps. Should they begin to give way, repair them with waterproof belt cement. Don't try to fix them by rivets or lacing.

3. Check the tension. Too tight a belt is hard on flexing fibers, hard on bearings. Too loose a belt won't pull the load efficiently.

4. Don't let shifters or step-cone pulleys rub belt edges, which would elongate one side.

5. Check pulley and shaft alignment. Don't run a belt that starts crooked. If it jumps off, find the reason.

6. Check the running direction. Single belts should have grain side next to pulley, with point of lap running away from pulley, rather than into it. Double belts should have inner lap pointing away from pulley, and outer lap pointing away from windage which is created by travel.

7. Nourish the belts by proper preservative. The tanner has compensated for nature's oils in the fibrous structure, but belts dry out eventually. Add a penetrating preservative that does more than merely dress the surface.

8. Watch your belt storage. Before storing away, clean your belts, cement loose edges or laps, and apply a preservative to both sides. Store them in a covered space, protected against dust and change of temperature. When putting belts into use again, give them another application of preservative.

9. Where belts are subject to frequent oil splash, as on machine tools, a water-and-oil-proof dressing should be applied to clean, degreased surface. It will prevent mineral oil from penetrating.

10. If it's a pivoted motor base drive, check the tension. Keep the pivot point located for most efficient tension.

THESE common-sense pointers on proper care of belts are covered in the new booklet "HOW TO MAKE YOUR LEATHER BELTS LAST LONGER . . . PRODUCE MORE" shown at left. Copies can be obtained by writing E. F. Houghton & Co., 303 W. Lehigh Ave., Philadelphia, Pa.

Houghton's

VIM TRED and OKAY TRED LEATHER BELTING

Mill News

GREENSBORO, N. C.—The Southland Hosiery Mill has been issued a permit to construct a 30x34-foot frame addition to be used as a dye room.

NORTH WILKESBORO, N. C.—Gordon Mills has been taken over by Gordon Spinning Co., of North Wilkesboro, with $300 subscribed by S. V. Tomlinson, J. R. Hix and R. W. Gwyn, of North Wilkesboro.

GRANITE FALLS, N. C.—The Berton Hosiery Mills, on the highway between Granite Falls and Hickory, is established in a new two-story building. The mill, formerly housed in a one-story wooden building, manufactures men's half hose.

DURHAM, N. C.—Lloyd Brewer has been appointed assistant superintendent of the full-fashioned mill of the Durham Hosiery Mills. He will be in charge during the absence of H. T. Goss, who is recuperating from an illness. Previously Mr. Brewer was with the full-fashioned divisions of the Standard Mills and the Burlington Mills.

GASTONIA, N. C.—A certificate of incorporation has been issued to Spinners, Inc., of Gastonia, to manufacture yarns, cloths and all kinds of textile fabrics.

The authorized capital stock was $100,000 with $12,000 subscribed by J. P. Sanders, R. J. Hooker, Eleanor S. Reynolds and Luther Reynolds, all of New York, and J. L. Gray, Jr., of Gastonia.

WOODRUFF, S. C.—All of the houses at Brandon village are being painted on the outside this month, three basic colors, gray, white and yellow being used in groups of three homes on each street, which makes this one of the best kept communities in the State.

The houses were repaired, rewired and painted on the interior a short time ago, and the grounds of the village beautified with shrubbery.

HIGH POINT, N. C.—Adams-Millis Corp. reports sales of $7,756,052 for the year ending December 31, 1941, with net profit of $624,231, after all charges and provision for Federal income and excess profits taxes. These figures compare with sales of $6,909,860 for 1940 and net of $472,250. Earnings last year were equal to $4.00 a share on 156,000 shares of common, compared with $3.02 in 1940.

CHARLOTTE, N. C.—The Charlotte Tent & Awning Co. has leased the building formerly occupied by the Okey Hosiery Co. and will begin the manufacture of tenting for the United States Army.

Machinery is being installed and contracts have been obtained from the Army. One shift will be employed at the beginning but the second will be put to work in two weeks. The company will continue to manufacture awnings for civilian use at its other plant here as long as the present supply of materials lasts.

R. P. Steffey is president of the concern.

CHARLOTTE, N. C.—The Marjane Weaving Corp., a new industrial concern for this city, has received a North Carolina charter to manufacture and sell textile goods and machinery and other equipment. The incorporators are: J. B. Rudisill, F. W. Warrington and Frank W. Orr, all of Charlotte. The authorized capital stock is $100,000, with $300 paid in.

Officials of the company are: president, F. W. Warrington; vice-president and treasurer, J. B. Rudisill; secretary, Frank W. Orr. The plant is located at 504 South Graham street, and is operating on the manufacture of webbing for the Government.

SPARTANBURG, S. C.—War equipment made from cloth produced at the Beaumont Mfg. Co. was the center of attraction at a rally recently at the mill grounds, at which it was noted that the employees have exceeded their pledge to produce goods for the defense program.

Having pledged a carload of duck cloth for each day, the output for the month of May totaled 35 carloads, it was stated. Approximately 1,200 persons attended the rally including mill officials, high ranking Army officers, civic officials and a detail of non-commissioned officers from the 40th Training Battalion, Camp Croft.

Walter Montgomery, president of the Spartan Mills and the Beaumont Mfg. Co., was among the speakers. Maj. James E. Baker, of the Quartermaster General's office in Washington, D. C., was the principal speaker.

Among the products displayed were gas mask covers, canvas for canteens, shelter halves, habersacks, a full field pack, as wel as a pyramid tent.

MOORESVILLE, N. C.—Judge Luther Hamilton, presiding at Charlotte over a term of Superior Court, said that he will sign a judgment against the Mooresville Cotton Mill in favor of the Commercial National Bank, trustee of the estates of L. W. Sanders and Winston Davis Adams. The case was heard by Judge Hamilton, both sides having agreed to dispense with a jury.

Sanders and Adams held preferred stock in the mill and when it was reorganized in 1933 they refused to turn in their stock in exchange for reissued stock. The suits were brought in an effort to force the mill by directors to pay dividends on the preferred stock and not upon a basis of the reissued stock.

Judge Hamilton said he ruled in favor of the bank because the mill directors and Sanders and Adams had entered into an express contract when they bought the preferred stock and that that contract could not be broken without the consent of Davis and Adams.

Personal News

Lt. Henry B. Malone, of Ciba Co., Charlotte, N. C., has called into active duty with the Army.

E. A. Sale, president of the Sale Knitting Co., Martinsville, Va., and civilian defense co-ordinator for his city, recently addressed the Rotary Club of Martinsville.

J. E. McDougall, Jr., son of J. E. McDougall, who has charge of the Priorities Office for North Carolina and South Carolina, has entered naval aviation.

Harry W. Noyes, of Asheville, N. C., has accepted a position as cost accountant with the Oconee Mills, Inc., Westminster, S. C.

John Warlick, superintendent of the Falls Mfg. Co., of Granite Falls, N. C., has been elected mayor of Granite Falls.

R. H. Chase has resigned as superintendent of the Monroe (N. C.) Mills Co. to become superintendent of the Nashawena Mills at New Bedford, Mass.

C. L. Poole, formerly of Brookside Mills, Knoxville, Tenn., is now superintendent of carding and spinning at Judson Mills, Greenville, S. C.

W. M. Carlisle, formerly of the Riverside plant of Gossett Mills, Anderson, S. C., is now superintendent of Gossett Mills, Pendleton, S. C.

W. Preston Dunson, superintendent of the American Thread Co., Dalton, Ga., has been elected vice-president of the Dalton Civitan Club.

W. M. McLaurine, secretary-treasurer of the American Cotton Manufacturers' Association, addressed the Rotary Club of Spartanburg, S. C., on June 8th.

Henry W. Rittenberg, of the Mathews Cotton Mills, Greenwood, S. C., has announced his candidacy for the South Carolina House of Representatives.

J. C. Moreland, formerly of Jos. Bancroft & Sons, of Reading, Pa., is now overseer of spinning at Edna Mills Corp., Reidsville, N. C.

J. Dixon Leslie has resigned as city chemist for Rock Hill, S. C., to become chemist for the Springs Cotton Mills at Lancaster, Chester, Kershaw, and Fort Mill, S. C.

Milton Croom has resigned as chemist for the Springs Cotton Mills, of South Carolina, to become a Lieutenant (JG) in the U. S. Army.

Howard R. Hart, superintendent and vice-president of the Brighton Mills, Inc., Shannon, Ga., has been elected commander of the Shanklin-Attaway Post of the American Legion at Rome, Ga.

J. J. Mills, formerly engineer for Saco-Lowell Shops in Boston, has accepted a position as processing engineer in the development department of U. S. Rubber Co.'s textile division, at the Stark Mill, Hogansville, Ga.

Miss Opal Johnston, daughter of Earnest A. Johnston, card room overseer, has been promoted from inspector in the cloth room to timekeeper at the No. 1 plant of the Jefferson Mills, Jefferson, Ga.

Caldwell Ragan, of Gastonia, N. C., president of the Ragan Spinning Co., has gone to Washington, where he has been sworn in as unit chief of the combed yarn division of the War Production Board.

Alex Hanes, Jr., who has been associated with the Charlotte office of the American Viscose Co., has entered the army and will be given cavalry training at Fort Reilly, Kan.

Eddie E. Jones, Jr., formerly connected with the Chattanooga office of the Johnston Mills, Charlotte, N. C., has entered the army and is now located at the Olympia Air Base, Olympia, Wash.

James G. Torrens, statistician for the Cotton-Textile Institute, has assumed his new duties on the staff of the textile section of the War Production Board where he will be in charge of cotton goods statistics.

Francis X. Minich, formerly purchasing agent of the Pendleton Mfg. Co., LaFrance, S. C., has been made comptroller and assistant secretary of the Gardiner-Warring Co., Florence, Ala.

Paul Zweifel, of Spartanburg, S. C., son of Fritz Zweifel, of H & B American Machine Co., was badly injured in an automobile accident recently, but the hospital in which he is confined reports that his condition is improving.

L. E. Parsons, formerly of E. I. du Pont de Nemour & Co., Old Hickory, Tenn., is acting head of the department of textile engineering at Texas Technological College, Lubbock, Tex., in the absence of Cash Stanley, who has been called into active duty as an officer in the army.

Wm. H. Spann, the first mechanic to be employed in the rayon industry in the United States, has just celebrated his 32nd anniversary with the American Viscose Corp. He is now chief engineer of the corporation's sales development department and textile unit at Marcus Hook, Pa.

Robt. A. Morgan, textile engineer of Rome Ga., and also president of the Morgan Mills, of that place, is now general manager of an army ordnance plant at Jacksonville, Ala. The AOP News, published at the plant, carries Mr. Morgan's picture and comments upon his popularity with the employees.

H. G. Woodbury in Charge of Combed Goods

Succeeding George E. Westberg in charge of combed goods at the War Production Board headquarters in Washington is Horace G. Woodbury, manufacturing agent at the Wamsutta Mills, New Bedford, Mass., it was learned in the New York market recently. This report was confirmed in New Bedford.

Mr. Westberg, as noted, was promoted in the WPB to succeed the late A. J. Rice as chairman of the textile joint procurement committee, set up by the Purchase Policy Committee of WPB's Division of Purchases.

Mr. Woodbury has long been associated with the textile industry. Starting with hte Amoskeag organization in Manchester, N. H., he joined the New England Cotton Yarn Co., and at one time was superintendent of carding for that company at the Bennett Mills in New Bedford. Sometime after joining the Goodyear Tire & Rubber Co.'s fabric purchasing department in Akron, he resigned to join the U. S. Army as captain in the Quartermasters Department during the first World War. He was in charge of the purchase of textiles.

Following the armistic, he joined the textile selling house of Ridley Watts & Co. in New York, where he had charge of that company's Wamsutta account and that of the Warren Mfg. Co. Associated later with the Newmarket Mfg. Co.'s account for Henry Searing & Co., he finally joined the Wamsutta organization as salesman for its gray goods division. Following a connection with the New York office of the Industrial Rayon Corp., he returned to Wamsutta in 1930 to serve as salesman, sales manager, and more recently as manufacturing agent.

$110 Fine Levied After Brawl in Mill At Maiden

Newton, N. C.—Fines totaling $110 aside from court costs were imposed by County Judge W. C. Feimster at the close of the trial of three Maiden mill workers, charged with various degrees of assault.

George Rogers, foreman at the Union Cotton Mill, drew the heaviest fine, $50, when convicted of assault with a deadly weapon on W. T. Henly, an employee of the mill, who paid $25 himself for simple assault.

Wade Rogers, son of the mill foreman, was taxed $40 and the costs for participating in the affray. He was convicted of assault.

OBITUARY

MRS. ELIZABETH E. FOX

Charlotte, N. C.—Mrs. Elizabeth Elliott Fox, of this city, died at her home after a long illness. She was well known in textile circles as the wife of John W. Fox, of the Duke Power Co., and mother of John E. Fox, textile machinery salesman. Other children are Edwin F. Fox, of Taylorsville, and Miss Marguerite Fox, of Charlotte.

W. H. McDANIEL

Albany, Ga.—W. H. McDaniel, 65-year-old superintendent of the Flint River Cotton Mills, died June 1st.

Mr. McDaniel was born in Hancock County. As a young man he became a sweeper in the Bibb Mills at Mason, and after a series of promotions he became superintendent of the Flint River Cotton Mills, which position he held until his death.

JOHN R. DuBOIS

Goldville, S. C.—John R. DuBois, 65, overseer of the cloth room of the Joanna Cotton Mills at Goldville, died June 6th at a Clinton hospital after having been in declining health for several months.

Mr. DuBois, who was a native of New York State, had resided in Goldville 14 years. He was the son of the late Harvey D. and Mrs. Emma Campbell DuBois. Mr. DuBois was a member of the Masonic lodge.

TEXTILE BULLETIN

Member of
Audit Bureau of Circulations and Associated Business Papers, Inc.

Published Semi-Monthly By

CLARK PUBLISHING COMPANY

Offices: 218 W. Morehead St., Charlotte, N. C.

Eastern Address: P. O. Box 133, Providence, R. I.

David Clark - - - - President and Managing Editor
Junius M. Smith - - Vice-President and Business Manager
Ellis Royal - - - - - - - - Associate Editor

SUBSCRIPTION

One year payable in advance	$1.50
Other Countries in Postal Union	3.00
Single Copies	.10

Contributions on subjects pertaining to cotton, its manufacture and distribution, are requested. Contributed articles do not necessarily reflect the opinion of the publishers, Items pertaining to new mills, extensions, etc., are solicited.

Tricky CIO Lawyers

On April 27th President Roosevelt laid before Congress what he designated as an "all-embracing program for the control of inflation."

He firmly stated that every part of the Nation —including those who live by profits, wages and farm prices—must be brought within this program or it will fail. As between farmers and factory laborers, the intention to give equal treatment was symbolized by the parallel language which the President employed in stating the third and fourth points of his program:

"Third. To keep the cost of living from spiraling upward, we must stabilize the remuneration received by individuals for their work.

"Fourth. To keep the cost of living from spiraling upward, we must stabilize the prices received by growers for the products of their lands."

In spite of this anti-inflation statement by President Roosevelt and in spite of the fact that less than 3 per cent of the cotton mill employees of the South are members of the CIO, the tricky lawyers employed by that organization are laying shrewd plans to greatly increase the costs of cotton manufacturing and to force a large portion of the cotton mill employees of the South to come under their control.

The National Cotton Council of America, becoming aware of the CIO plans, addressed a communication to the National War Labor Board from which we quote the following:

"We are deeply concerned lest the temporary profits of the cotton mills be used by the CIO as a lever by which to gain permanently a further advantage over the cotton farmer. This is CIO's obvious intention. There can be no doubt that the high level of mill profits is temporary. The mills presumably have profited by the rise in prices. Such profits, presumably, have been halted. The mills are bound to have profited by the transition to a very high rate of operations, under which their overhead costs are spread thin over a large volume of output. The present level of operation is virtually twice as high as that which has been regarded as normal in the past. Profits resulting from this cause can last only so long as the present record-breaking volume of production lasts. When the profits subside, the price of cotton is bound to be affected. If, in the meantime, a general wage increase has been shoved into the picture, the farmer will suffer not only immediately, but permanently. He will face a new and permanent wage barrier which must be hurdled before he can get his product into final consumption. The volume of cotton consumed will be permanently affected. The farmer's income will be permanently affected. Let us not permit a temporary circumstance to open the way for a permanent maladjustment. If mill profits are temporarily abnormal, they can be dealt with through taxation. This solution is consistent with the price control program. A wage increase is not.

"In its statement presented to the War Labor Board, the CIO states that this is 'the opportune time' to raise cotton mill wages. We submit that this is the most inopportune time imaginable for the development of strife and dissention between groups of Americans; between industrial labor and farmers; between labor and capital or management; or between Americans, regardless of their vocations or avocations. We are confronted with a formidable enemy. All of our resources, all of our ingenuity, and all of our strength must be combined in a single all-out effort to defend our Nation, ourselves and our American way of living.

"With the Nations at war, with the whole population being asked to place its faith in the President's program of price control, with our soldiers in Japanese prison camps, with our men on the battle lines of all the earth's corners—is this 'the opportune time?' Must it be said that America's danger is the CIO's opportunity? We do not believe that the workers in our cotton mills, if properly informed of the facts, would desire a wage increase under the present circumstances. We do not believe that the American farmer and the general American public would tolerate it. We cannot believe that your Board will grant it."

The above very strong statement was made by an organization of farmers but shows a very clear understanding of the tricky proceedings now under the guidance of the CIO lawyers.

The CIO has not been able, through its own power, prestige or promises, to organize more than a very small portion of the textile mill employees of the South, so now by subterfuge, it schemes to take a few mills to the War Labor Board, hoping thereby, through Government intervention or edict, it may reach out and absorb the Southern textile industry into its power and control and practically freeze out its competitor, the A. F. of L.

Everyone knows that the OPA has placed a price ceiling upon cotton yarn and cotton goods. There are two variable factors—labor and raw cotton.

Through the influence of someone the OPA sent out on May 23rd a statement showing cer-

tain alleged conditions in the industry. Their statement contained many errors and indicated some margins which did not exist.

The CIO lawyers are using the statements of the OPA as part of the basis of their claims and are entirely ignoring the inflation which would result from the demands which they are now making.

They demand, among other things, that the same wages be paid in the South as in the North but refuse to consider the lower cost of living in the South or the disadvantages of Southern mills because of freight rates which favor New England mills.

Laying Eggs for Future Larvae

The first consideration of every loyal American should be the winning of this war, but it seems to us that there are, in Washington, substantial size groups who are more interested in plans for the control of our Government, after the war, than in our victory.

Like parasitical insects which bore holes in fruit, damaging the present crop, and laying eggs which will produce parasites for other years, these men and women have bored their way into the Government and are "laying their eggs" in the form of schemes that will insure perpetuation of their power after the war is ended.

Most of them were aligned with pacifist groups and worked unceasingly to disrupt our production of arms and ammunitions during the period after Russia had invaded Finland and was thought to be an ally of Germany, but flamed into loyalty and became all-out advocates of tremendous war production when Germany suddenly turned against the Soviets.

Had Hitler not attacked Russia, the FBI would, in our opinion, have had to keep a constant watch upon many persons who are now high in Government circles.

While they seek to aid Russia, because of ideas which they think still belong to that country, they are scheming and working and planning for a communist form of government in the United States after the war.

While they are making these efforts, many of them do not realize that Russia has drifted far from its former communism and that after the war will probably have a very stable form of government and one much different from their own ideals.

These men are now attacking the oil companies, the steel companies and the dyestuff and chemical industry and attempting to picture them as having deliberately and knowingly aided Germany in its war effort.

They know that the public mind is now very sensitive to anything which smacks of disloyalty or of aiding the enemy and that few will realize that any collaboration, which was given to German chemical groups, was prior to the war and, that at the time it was given would not have been criticized.

These people refuse to give the American dyestuff and chemical industry credit for the enormous developments which have been made since World War No. 1.

Many of us remember the situation which developed during that war and the difficulty of obtaining dyestuffs and chemicals when we were suddenly deprived of the imports from Germany.

It is to the credit of the dyestuff and chemical industry, that our Government, and our textile and leather industries, now have ample supplies of dyestuffs and chemicals.

Our war production has called for an immense volume of dyestuffs and chemicals, of many kinds, but the industry has met the demand and has done so without materially advancing prices.

The plotters and schemers, in their effort to discredit industries, make it appear that enormous profits have been made in the dyestuff and chemical industries but neglect to state that most of those profits have come from the production of new and useful products as the result of expensive research.

Years of time and hundreds of thousands of dollars were spent in discovering improved methods of producing what was formerly called artificial silk but is now known as rayon.

Chemical manufacturers then continued to spend time and money until a super synthetic such as nylon and similar yarns was developed.

Research in dyestuffs, chemicals and synthetic fibres was not limited to any one firm but was conducted by dozens of dyestuff and chemical companies and but for those efforts our ability to produce explosives and other things now needed would be greatly curtailed.

The plotters know that had not expensive research produced super synthetic yarns, of which nylon is an example, the elimination of silk would have made our aviators dependent upon parachutes made of cotton and multiplied the risk of those who are forced to bale-out.

With their eyes and their minds upon the control of our Government after the war, a group whose loyalty to the United States is secondary, spends time trying to discredit, among others, the dyestuff and chemical industry and carefully refrains from giving them any credit for the immense and valuable contribution which it has made and is making to our war effort.

DYEING AND FINISHING

Properties of Chemicals That Make Them Valuable for Textile Processing

By D. P. Quinn

PART X – SILICATES

The Use of Silicates in Peroxide Bleaching of Wool

OVER the past ten years there has been a gradual increase in plants using peroxide in the bleaching of goods containing 100 per cent or less wool. In this peroxide bleaching operation there has always arisen the objection of the older plant officials that sodium silicate was taken up by the wool during the bleaching operation and for this reason they preferred replacing silicate with ammonia or ammonia and borax together. Many plants have conducted tests on wool bleached with peroxide and liquid sodium silicate and have bleached wool samples free of silicate and no distinctive difference in the take up of dyestuffs otherwise than a very uniform and level dyeing results.

Experienced wool bleachers now try to work out thorough plant control methods for bleaching wool with peroxide and liquid sodium silicate. The processing factors that must be carefully controlled are:

(1) A uniform concentration of peroxide in bath. This requires frequent tests and replenishing bath with fresh peroxide.

(2) Keeping the pH of the bath at a stated value between 8.5 and 9.5 and maintaining the alkaline content at a definite concentration and feeding in replenishments in very small and diluted portions so as not to upset the bleaching speed of the bath.

(3) Maintaining a desirable temperature for a superior quality finished bleached goods not a temperature for speeding up the operation.

(4) The use of desirable agents for aiding wetting out of woolen goods during bleaching and compounds to help buffer or protect the wool fiber from excessive bleaching action.

(5) Proper control of bleaching period as the time element is important. Careful adherence to plant control bleaching operations has shown that wool yarns and goods bleached with peroxide and selected liquid silicate retain a better "white" over longer periods than other bleaching procedures.

Experimental Work on the Scouring of Wool With Silicates

Many woolen plants have investigated the possibilities of using the silicates in the various scouring operation for wool, as it is commonly known that many of the compounded soaps are prepared with silicates, hence woolen mill officials have been investigating the use of silicates in with other mild alkalies and soaps for reducing scouring costs and improving the dyeing, bleaching and finishing properties of woolens. Stericker[1] states that experimental work has not shown sodium meta silicate satisfactory for wool scouring, as it "burns" the exposed ends of the fibers.

Wool scouring compounds prepared with selected soaps fortified with liquid sodium silicate, sodium meta hexa phosphate or tetra sodium pyro phosphate has proven quite interesting to mills, as it gives a clean, well scoured wool satisfactory for dyeing or bleaching. It has been found that the water softening phosphate compounds work advantageously wherever the water supply is "hard" or the quality of wool is lower and very greasy.

Possible Application of Silicates to Plant Procedures by Compounding With Other Detergent Agents

Both sodium meta silicate and liquid silicate are finding many new applications through the compounding of one of these products in one or more of the following alkalies or soaps combinations.

(1) Soda ash plus soap for scouring under "softened" water conditions.

(2) For "hard" water conditions use calgon in with soap or sulfonated alcohol (Gardinol, Igepon, etc.) on rayons, acetates and nylons.

(3) For greasy wool stock under soft water conditions use low titer soap plus tetra sodium or potassium pyro phosphate and liquid silicate. If the water is "hard" replace a portion of soap with sulfonated

1. Sodium Silicates in the Textile Industry, William Stericker, American Dyestuff Reporter, page 274, May 16, 1938.

alcohol or use calgon so as to keep water properly conditioned for active scouring operations.

(4) A useful compound can be prepared by adding a small amount of tri sodium phosphate in with liquid silicate for inhibiting or reducing the formation of rust in water pipes and other iron containers exposed to the usual treated water as it comes from water treating plants.

These dosages are very small and it is best to obtain these recommendations from a reliable sodium silicate maker, as this is an application that requires extended treatment over several month periods to properly coat the inside of pipes. At the present time, this is a very valuable point, as all plants may have great difficulty obtaining new supplies of steel pipes. Stericker[1] recommends dosages of eight to forty-five parts of silicate (soluble silicate) per million parts of water to start the formation of this protective coating on the inside of piping.

Less Widely Known and Applied Silicate Compounds

(1) Sodium Alumino Silicate—

This compound was offered to the textile industry for use in kier boiling of cottons. It possesses properties similar to sodium meta silicate but also has certain disadvantages such as containing sufficient aluminum that goods kier boiled with it must be used entirely for white bleached goods as the aluminum present may act as resist agent during the dyeing of various types of dyestuffs.

American Dyers and Finishers Are Doing Their Job

Our well meaning economists, both speakers and writers, have been telling John Public about the doldrums that the Textile Industry has been in for the past ten years or more and how smart the other great industries are by their long term economical planning. All of these stories were well meant but many were written by "swivel chair" economists who have never been inside of a textile plant except to obtain pictures to illustrate one of their featured articles with. But lo, and behold! the downtrodden Textile Industry has quickly but thoroughly put through the governmental requests for the processing of war contracts without a great amount "to do" about their work.

If our well meaning economists could grasp this situation, they would tell you why our American dyers and finishers are doing their job so thoroughly and conscientiously in spite of the fact that their technical personnel is greatly reduced by military service calls and others leaving for the so-called defense industries. These dyers and finishers are in an industry that teach their men "to think on their feet" and not to think what they could do if they had an ideal plant with all the new and modernized equipment which is very fine but only a few have this equipment available.

The Government asked for millions of yards of vat dyed cotton twills, for uniforms cloth, but a survey showed that only a few plants had the ideal layout and equipment for these goods. This survey was fine but it did not

stop our original thinking dyers. They have stepped in and are running these uniform goods in plants not considered properly equipped mechanically but with good old American thinking and working ability.

Before the Pearl Harbor "sneak" attack, mills in this country were replacing silk with nylon as fast as they could work out their manufacturing, dyeing and finishing problems.

The Government publicity experts announced in our current newspapers where a pretty girl "exposed" herself to death in testing a nylon parachute. Yes! we all realize the pretty girl will be seen in movies, newspapers and picture magazines but no one will ever see or know about those American dyers and finishers who worked out methods to process and finish that sheer nylon fabric whereby it is now possible to use it for parachute fabric. Those dyers and finishers are not in the glamour pictures but in there with good old-fashioned original American thinking and doing a tough job better and faster than all of the super technological brains of the Nazis and patent copying Japs.—Tech. Ed.

Chemical Firm Cases Deferred for Duration

Washington, D. C.—The trial of eight chemical companies and 20 individuals on charges of conspiracy to violate the anti-trust laws by monopolizing the manufacture and sale of dyestuffs has been postponed for the duration on the representation of Secretary Stimson that to proceed would "seriously interfere with the war production effort."

The Justice Department disclosed this in an exchange of letters between Stimson and Attorney General Biddle. The postponement "to a later date" is in line with an agreement among the War, Navy and Justice Departments approved by President Roosevelt on March 20th.

The dyestuffs indictment was returned by a Federal grand jury at Trenton, N. J., on May 14th and named as defendants or co-conspirators all of the principal chemical companies of the world, including the largest ones in Germany, France, Great Britain and Japan.

The actual defendants were topped by the giant E. I. du Pont de Nemours & Co., of Delaware, and included Allied Chemical & Dye Corp., American Cyanamid Co., General Aniline & Film Corp., General Dyestuff Corp., Geigy Co., Inc., Sandoz Chemical Works, Inc., and Ciba Co., Inc., all of New York.

R. D. Howerton To Chicago for Calco

Calco Chemical Division, American Cyanamid Co., announces the appointment of R. D. Howerton as manager of its Chicago office, with headquarters at 146 West Kinzie Street.

A native of Lexington, Va., Mr. Howerton was graduated from Washington and Lee University in 1922 with a degree of Bachelor of Arts in Chemistry.

After a year with the teaching staff of Staunton Military Academy in Virginia he started his business career in the textile plant of Stonecutter Mills, Spindale, N. C. From that time Mr. Howerton has been identified with the dyestuff and textile equipment fields.

Let's Streamline Our Jobs—Spinning Fixing

(*Continued from Page 22*)

new routine. Fifth, the total number of spindles should be divided equally between the number of shifts in operation.

For instance, suppose you have ninety-nine frames with two hundred and forty spindles per frame. Begin with the first thirty-three frames and paint the numeral No. 1. This will indicate that these frames belong, as far as upkeep is concerned, to the first shift. The second thirty-three frames should be painted with the numeral No. 2, indicating these frames as belonging to the second shift, and the last thirty-three with the numeral No. 3 painted indicating these frames belong to the third shift. Each shift will then be responsible for a definite number of frames as to maintenance. Regular fixing will be continued over the whole job in charge of the fixer as has been before the new program.

Begin with frame number one on the first shift, having the frame checked according to the form listed elsewhere. Adjust all needed parts. Replace worn parts that will result in future trouble or cause bad work. The fixer will then file his report with the room foreman who will in turn recheck the frame to see if the job has been done properly. On the second shift begin with the first frame marked number two. The third shift begin with frame marked number three and continue the procedure as outlined for shift number one. (In the rechecking it would be better for the room foreman on the shift following do the rechecking and report any negligence back to the previous shift if any has occurred.) A chart is listed, and if for any reason a frame is not completed the shifts should co-operate with one another to the extent that the following shift should complete the job before going to another frame.

Date_____

SPINNING DEPARTMENT

DALY FRAME MAINTENANCE REPORT _____

1. Frame No. _____
2. Yarn No. _____
3. Trav. No. _____
4. Size Ring _____
5. Make Fr. _____
6. Hk. Rov. _____
7. No. Rolls changed _____
8. Skewers replaced _____
9. Cover on flats and revolving cleaners checked _____
10. Gears _____
11. Wgt. Levers leveled _____
12. Roller bar fingers tightened _____
13. Chokes on steel rolls _____
14. Cover on Scavenger Roll checked _____
15. Chokes on lifting rods cleaned _____
16. Tapes or bands cut off _____
17. Clean Pick and builder gear _____
18. Check Builder chain _____
19. Check pick stroke and bunch _____
20. Clean Pittman Roll _____
21. Level traverse rail _____
22. Cyl. Bearings checked _____
23. Check Shifter handle _____

24. Check belt shifter _____
25. Check Knock-off _____
26. Check Outrigger Bearing and cover _____
27. Check loose pulley _____
28. Check roving traverse, clean and oil _____
29. Clean Hk. clock _____
30. Check all covers _____
31. Check reel strips _____
32. Check idle pulleys and blocks _____
33. Check belt _____

Remarks _____
Shift _____
Section Man _____
Room Foreman _____
Rechecked by _____
Remarks _____

As the reader has probably noted, if the above is properly carried out, overhauling as we know it today will have been practically eliminated. There will be for the regular periods of overhauling only the leveling and lining of the roll stands, plumbing the spindles and scouring the rolls. You will have also noted that big breakdowns will diminish because the frames are being constantly semi-overhauled, fixing the little things that eventually cause the larger break-downs.

In addition to the above you have also noted that by keeping the regular schedule of frame checking, less and less work will be done on each frame each round. You should be able to start the program with one frame each day and increase the number until the fixer can easily check three frames per day without interfering with his regular routine.

In listing the advantages against the disadvantages we find that the former greatly outweigh the latter. However, the condition of the frames, the number of frames to the section man, the type of section man will certainly enter into the picture as well as the salvaging of semi-worn parts. In concluding we are listing some of the known advantages and disadvantages.

ADVANTAGES

1. Fixer organized into a definite system whereby he has definite duties to perform each day.
2. Semi-overhauling being done all three shifts, instead of cluttering up the room with a group of overhaulers, resulting in confusion and loss of production.
3. Frames needing only roll scouring, leveling, lining, renecking, and spindle plumbing at regular intervals.
4. Able to obtain a maximum of life from all parts, including rolls, skewers, gears, studs, etc.
5. Less ends down per thousand.
6. Considerable decrease in major breakdowns which cause loss of production.
7. Cleaner frames.
8. More even yarn, less variation in weight and strength.
9. Elimination of an overhauling or maintenance force.
10. Each shift systematically checking on each other.

DISADVANTAGES

1. One frame out of production each shift during time it is being checked.
2. Fixer unable to supervise help.

Transporting Workers

The gasoline and rubber emergencies have combined to confront South Carolina workers with the serious problem of getting to work.

In the textile industry, the development of the second and third shifts within recent years has found a housing shortage in the mill villages. As a consequencee, from 50 to 60 per cent of the employees of the cotton mills of the State reside a considerable distance from the mill. Many of the non-residents live several miles in the country on farms. Some of them operate small farms, a condition made possible by the shorter working hours.

This was believed to be a healthy condition until the emergency limited transportation facilities. Now the very serious question is "How will those who live at a distance get to the mills? How will the mills which are on war work secure workers to continue the heavy production which is demanded by the military?"

The gasoline situation is alleviated by the special consideration given war plant workers in gas rationing. But with tires it is different. In a very few months most of them will be worn away.

Manufacturers, the State Defense Council, the bus lines, the S. C. Highway Department, private and public carriers are facing the problem and endeavoring to press into service all transportation facilities in the State. In the solution of this problem uniform co-operation is needed. Employers should, if they have not already done so, carefully canvass the situation and determine the local transportation needs. Individuals who wish to operate as public carriers should contact the S. C. Public Service Commission. Owners of busses, trucks, station wagons and other larger vehicles not in use should make them available. Workers with cars should double up with those who do not have them. Together we can "lick" all our problems.—Wm. P. Jacobs, in The Ed-Clip Service.

Clarify Point On Bagging Order

The Textile, Clothing and Leather Branch of the War Production Board, in reply to trade inquiries, has clarified a point in connection with Limitation Order L-99.

If a cotton mill has manufactured or is manufacturing bagging material of other constructions than those listed in the order, for its own use or for sale to others, it will not be in violation of Limitation Order L-99 if these fabrics are manufactured on looms other than those converted to the production of bag osnaburg and bag sheetings by the provisions of the order.

If a mill wishes to use or sell standard bag osnaburg or bag sheeting as listed in L-99, for baling purposes, it is at liberty to do so under either of two conditions: (1) It may do so under Amendment No. 1 of the order, which frees from restriction of sale seconds, irregulars and pieces under 40 yards in length up to 6 per cent of the total production of bag osnaburg and bag sheetings, (2) it may do so from the production of looms other than those required to be converted under Order L-99.

Scheuer Appointed Textile Chief

Under Executive Order No. 9128 of April 13, 1942, Sydney Scheuer, head of Scheuer & Co., textile consultants, has become chief of the textile division of the Office of Imports of the Board of Economic Warfare. The work of Mr. Scheuer's department embraces replacements for this country of various raw materials which have fallen into enemy hands or which are required in greater quantities than are procurable at home under war conditions and large consumption.

The office under Mr. Scheuer's jurisdiction has as its objective the acquisition of stockpile commitments, as well as the development of new resources of fibers and other materials which must be replaced through the loss of possible loss of territory we formerly possessed. Every part of the world represents a definite or potential source of such supplies.

Included among the numerous classes of materials needed in terms of new resources are burlap, jute, sisal, hard and soft industrial fibers, leather and hides, tanning materials, wool, cotton, silk and a good many other things for which this country is in the market for varying quantities.

In connection with these activities the Office of Imports will issue the necessary directives. Negotiations will proceed in whichever foreign territories are most suitable for the introduction of production. Contracts and incentives will be furnished to provide supplies as, for instance, the development of rubber or other materials, though commitments to foster their production may extend over a period of several years. To this extent the Office of Imports is both a planning body to acquire raw and certain finished goods quickly or through cultivation envisaging resources from new territory into future years.

C. Ralph Ewing Makes Hole-in-One

Chattanooga, Tenn.—C. Ralph Ewing, of the Central Franklin Process Co., now ranks at the top among textile golfers as a result of his feat in making a hole-in-one on the 128-yard No. 13 at the Chattanooga Golf and Country Club.

Mr. Ewing was playing with W. W. Crews, Avondale Mills representative here, when the shot was made. The ball hit within six feet of the cup and rolled in. Pro Wilbur Oakes called it the greatest shot of Ewing's life but added that it was a major mistake. The shot will cost Ewing plenty because Crews is not going to give him any more strokes for a year, he has to present a $10 bill to the pro, and take his family and friends out and treat them to a dinner.

Rossville Mills Fight Tax Hike

Lafayette, Ga.—Attorneys for the Peerless Woolen Mills of Rossville, largest textile mill in this section, have filed a temporary injunction in the Walker County Superior Court, restraining Martin Clements, tax receiver; Claude Clements, tax collector, and H. C. Shelby, sheriff, from selling any property of the mill for taxes for the 1941 levy. The hearing will take place before Judge Claude Porter at Lafayette on June 26th.

Officials of the mill claim that they have paid all taxes due the State and county under the 1941 levy; that the board of equalizers of Walker County and the State Revenue Commissioner raised the taxes last year after the usual levy was made and that all of these taxes have been paid in full. They claim that the assessment made since that time is illegal.

Change in P-89 Gives Further Priority Aid To Chemical Firms

Washington, D. C.—The vital chemical war industries are granted further priority assistance in obtaining maintenance and repair materials by the terms of Amendment No. 1 to General Preference Order P-89, as amended, issued by the Director of Industry Operations.

The amendment allows the chemical producer to use an A-1-C rating to obtain 30 per cent of his regular supplies, and an A-3 for the remaining 70 per cent. The original order allowed use of an A-3 rating for the entire quantity. As in the original order, an A-1-A rating may be used to obtain supplies to repair an actual breakdown, and an A-1-C rating to avert an immediately threatened breakdown.

The amendment also allows an A-1-C rating to be extended by suppliers to replenish their stocks. The original order permitted and A-1-A or an A-1-C rating to be extended only when the supplier had no stock of the material in question. The supplier had formerly to depend upon an A-10 rating for replenishing his stock, which was found to be insufficient.

As in the original order, no use of these ratings may be made by any producer or supplier unless the producer shall have first obtained a serial number from the Chemicals Branch, and until he has filed with the branch certain required information.

Elizabethton Rayon Plants Gather 5,800 Lbs. of Scrap Rubber

Elizabethton, Tenn. — American Bemberg Corp. and North American Rayon Corp. have contributed more than 5,800 pounds of scrap rubber to the war effort. Also, 957,882 pounds of iron and steel, 34,882 pounds of brass and copper, 126,885 pounds of lead, 6,981 pounds of aluminum, and waste paper, burlap, jute and sisal twines.

Buchanan Shoals Plant Is Proposed

Washington.—A giant power plant on the great Pee Dee river at Buchanan Shoals on the State line between Marlboro County, S. C., and Anson County, N. C., was proposed by R. F. Hanna, of Cheraw, president of the South Carolina Economic League, which is furthering the use of barges in the Great Pee Dee river as far north as Cheraw.

Index to Advertisers

Classified Department

WANTED—Shift Foreman now employed over carding and spinning desires to make change. Best of references. 36 years old; with family. Can call for interview; change change on week's notice. 10 years on section; 6 years as shift foreman and second hand. Address "Box 6-T," c/o Textile Bulletin.

ROLLER COVERER

With 32 years' experience covering all kinds of rolls with all kinds of skins. Who own roller covering outfit wants to communicate with mill who would like to put in shop either on contract or salary basis. Please wire or write and I will arrange an interview with you. Can come at once.

H. C. Swann
1209 Chestnut St., Kingsport, Tenn.

Opening for Overseer of Weaving

Splendid opportunity for right man in North Carolina mill. Position will include responsibilities of assistant superintendent as well as overseer. Give complete record of experience and references.

Address "S. S.,"
c/o Textile Bulletin

FORMER MILL OWNER open for position as Overseer in large weave department. Not subject to war duty. Good references. Address "W-D," c/o Textile Bulletin.

WANTED—Position as Overseer Spinning. Prefer place in South Carolina or Georgia. Age 52. Expert spinner. Can furnish good references. Address "Spinner," c/o Textile Bulletin.

Viscose To Furnish Air Spotters Shelter

A building specially equipped for the use of the Volunteer Civilian Aircraft Spotters of Lewiston, Pa., is to be erected on Viscose Hill, a short distance outside the city, by the American Viscose Corp.'s Lewiston plant. The women volunteers comprising the air spotters' group are serving shifts of four hours each from early in the morning until 8 o'clock each evening and heretofore there has been no suitable shelter for their use during stormy or inclement weather. Their post is under the control of the United States Government and operates in direct contact with the United States Army.

Cotton Good Markets

New York.—Amendments to OPA Order 118 bring another large segment of the primary cotton goods markets under a much simplified and therefore far more workable price system. Carded and combed gray cloth and some colored goods and domestic lines had been under definite ceilings, while many other lines including gray goods above 48 inches in width were under Order 118 which required each individual to go back to his own prices of last summer and adjust them upward to the extent of 5c a pound cotton content. Naturally any system which creates as many ceilings as there are sellers is cumbersome and only a stop-gap. The trade itself, working through the Association of Cotton Textile Merchants of New York, and with the aid of the Office of Price Administration, is is in a large measure responsible for these amendments to Order 118 which establish more definite ceilings on many fabrics. Further amendments are to come, however, on some items. Once remaining amendments to Order 118 are completed, and once fine goods not yet under Schedule 11 and hence subject to the General Maximum Price Order are adjusted, the work will be virtually completed for the primary markets. Rollbacks, minor adjustments, or possible later difficulties over labor or material costs will be the only real sources of concern.

Despite the increase in releases for civilian purposes during recent weeks the bulk of the production of cotton mills is still said to be going to defense uses, while rayon mill production is steadily mounting in this direction. The impression in the cotton and rayon gray goods market is that the available supplies of cloths for consumer needs has expanded only because of the easing in placement of Government orders. Some are of the opinion that with the turn in the Federal fiscal year, both markets will witness a resumption of activity of military orders and curtailment in allotsments of goods for ordinary everyday purposes.

Weakness in the raw cotton market with prices easing is believed to have been a strong influence in having mills let out goods. The point was frequently brought out that with goods selling at a basis of 48 cents a pound, the maximum which the OPA set for Class A print cloths, mills could let out goods inasmuch as the 10-spot average ranged from a low of 18.28 to a high of 18.79 during the past week, which would have placed cloth on a basis of 45½ to 46 cents a pound if the sliding scale were still in operation.

Cotton Yarn Markets

Philadelphia.—Cotton yarn distributors report having done a fairly active business during the week ending June 13th. Inquiries showed a gain over previous recent weeks and to a limited extent market interests have found it easier to arrange with spinners for the deliveries sought by customers. Customers have the opinion that possession of stocks of manufacturing materials and finished merchandise for fall and next winter's business is advisable. Civilian consumers of sale cotton yarn are substantially under-bought beyond next September, according to advices here.

A number of concerns in various lines no longer are users of cotton, having converted to war work. Yarn owned by or on order for them has in many instances become available for resale. A variety of counts and kinds of yarn has been involved, but not in large amounts.

In coarse and medium carded numbers there has been some increase in available deliveries from the spinners for civilian use. These extra supplies are not yet regarded as entirely dependable for the deliveries sought. In general, yarn mills apparently can operate at their present rate through July and August without new buying of consequnce. In about six weeks the military buying agencies will resume their routine operations, involving large quanties of cotton and other items, mostly for deliveries in 1943.

The majority of sale yarn sources are expected to continue holding civilian consumers down to forward deliveries of 60 to 90 days, but over the next few weeks some suppliers believe there will be an opportunity for certain manufacturers to protect themselves more fully, if they use carded counts.

It is reported that spinners and distributors are being called on more often to quote prices and delivery dates on carded yarns of a more or less special character. These requests sometimes are made by Government agencies. At other times they come from regular customers, whose customary products are being adapted to wartime conditions. Other such inquiries come from manufacturers who either never sought carded yarn before, or who now are planning to make an entirely different type of goods.

Spinners have had to change their usual methods and practices, more or less, owing to price regulations, military needs, etc. In times of active demand the yarn mills seek to price every item on a basis to yield an operating profit, but this is becoming more difficult to do, with Federal agencies and others calling for services of a special nature.

Card Speeds, Maintenance, Conversion, On Program of Eastern Carolina Division

(*Continued from Page 18*)

thought of a story Governor Broughton likes to tell. It seems that some sportsmen took an old darkey down to a place on Currituck Sound for a fishing trip. They wanted right much attention and kept him up nearly all night waiting on them and then got him up early the next day to go fishing. On the way back that evening, after dark, they got sleepy, and they put Mose to running the boat. One said: "Mose, you see that star? Now, just keep the boat headed toward that star, and we'll get back all right." Then he and the other man lay down in the bottom of the boat and went to sleep. Mose got along all right for a while, watching the star and keeping the boat pointed in its direction, but finally he, too, got drowsy and dropped off to sleep. Awaking some time later, he saw the sky was filled with stars. After endeavoring for a while to single out the one toward which he had been steering, he became panic-stricken and, waking up one of the men, said to him: "Boss, that star got lost. Give me another star to steer by."

Getting a maintenance man up here at this time to talk to you, when we have run out of stars to steer by, does not leave him very much to talk about. As for replacements and repairs, you gentlemen are going to find that successful repairs on broken cast parts are just in ratio to your welder's ability in welding those parts and putting them back in their original shape. On our welding production we keep in constant touch with the foremen and assistant foremen in the weave rooms and the spinning rooms, to check up and see if this stuff is workable after we weld it.

There was a time when we went about this reclaiming process by grinding a "V" out and then filling up. Now we align the parts of the broken part in the original shape. After we align the two parts of that thing up, then the welder blows out a "U" here. (The speaker draws illustration on blackboard.) He does not destroy his alignment. Then he comes in and fills this thing up on this side with new weld metal. We have developed it to a degree where, in our welding department, we can float this new metal down so there is a minimum of filing or grinding. After he does that he can turn his jig over and reverse the process and build up the weld on the other side.

The parts you do not want to reclaim and the parts that are worth while reclaiming are in proportion to your priority rating. If you have anything higher than A-10 you are better off than we are. The time was when there were lots of false economies in the machine shop, but it has always been a known fact and a foregone conclusion that when you start figuring your cost on repairs your machine shop cost will run a straight line. It is costing you just as much to run your machine shop if you are taking care of only minor repairs as it does if you have your men producing. Mechanics are inclined to be a little bit stubborn, and they are temperamental. It is up to you gentlemen to route the work to the shop in such a way that you can get the work out of the men without making him mad and making his lie down altogether, because a mechanic will do that. I know; I am one of them.

Chairman Gilliam: From your remark about the ex-

pense of the shop, Mr. Benson, I judge it is just a matter of keeping enough work there to keep the men busy.

Mr. Benson: That is right.

Chairman: With the exception of the parts and of the material that goes into the repairs and of the welding outfit, the cost is about the same—the labor cost is about the same. You have to keep your shop busy?

Mr. Benson: That is right; you have to keep it busy.

In our shop we run both acetylene and electric welding. There was a time when we used brass to build up on our sand-roller necks. We had to take out the end of that to put in a new one. We do not do that now. Brass is a temporary repair, at best. But you cannot get a welding rod now unless you have a priority rating of A-1. From the amount of material it takes to reclaim them, sand-roller necks or cam shafts—anything of over 1″ diameter—can be reclaimed more cheaply than you can replace them, and you get a better job. But if your man has come along in the last few years he will have to learn to weld with annealed iron wire. Don't let him tell you he cannot do it, because we are doing it.

As to loom shafts, we used to take those to the blacksmith's shop and have the blacksmith heat them and shape them up. He just shaped those things back in their original shape. We do not do that any more, because we found when that thing was put on the shaft it upset the grain so that it broke off right away. I do not know whether you gentlemen have that trouble or not.

If your mechanic has imagination and ability he can build gang tools or tools that fit on his lathe. He can build a tool that will do several operations at one time. Multiple cutters are going to be one of the best labor savers in the machine tool end of it, particularly on any kind of stud. If you cut them in the quantities in which we have to cut them, you can tune up to a rate where you can save money on them. And, as I say, you have to pay the man whether he is working or not.

On the straight spur gears that we use, anything down to two pitch we cut. We have a gear shaper that the company bought a number of years ago and we cut all of our friction gears, and anything for the spinning room that they want cut we turn out. Any automatic gear-cutting machine is better than attempting to cut them on a milling machine. Mr. Lanier has one of the finest gear cutters, and if his mechanic would go out and buy him an old hoist arm off a dump truck, so he could rig that up, he would have something that I would not exchange for the finest new gear cutter.

Chairman: In speaking about welding, Mr. Benson, you dwelt mostly on electric welding. What about acetylene welding? Most of the mills—the smaller ones, certainly, I think—have that type. What is your experience with that type of welding?

Mr. Benson: Acetylene welding is the only successful method that we have found for reclaiming cast parts. We do some electric welding on cast iron, but it is not as successful as the acetylene welding. We reclaim gears where there are only a few teeth out; and if the management is in a hurry for gears, if it has a machine shut down for lack of it, we reclaim gears with as fine pitch as ten pitch.

By preheating that gear and using the grinding rock we shape that gear again.

Chairman Gilliam: You use the grinding rock instead of cutting?

Mr. Benson: Yes, sir.

Chairman: That saves time, I suppose?

Mr. Benson: Yes, and the gear is out of shape anyway. It probably has been in use for a couple of years. He takes the master gear and shapes it.

Mr. Marley: What is the difference in the cost of making those in the machine shop and buying them?

Mr. Benson: What does a gear cost you when you buy it? $16, say?

Mr. Marley: I do not know of any quite that high.

A Member: $11.

Mr. Benson: It takes our machinist an hour and a half to take a raw blank from the foundry, machine that thing all over, and get it ready for the gear cutter. His pay will run, for that particular gear, about 90 cents an hour. That casting costs you around 5½ cents a pound. You can figure 20 pounds of cast iron. After your machinist finishes machining that gear and puts it on the gear shaper he is free to go to some other job, because the gear shaper is automatic. When it finishes it rings a little bell, and the machinist drops his other job and comes and takes it off. We figure it costs us from about $4.50 to $5.00 to make those gears.

Mr. Marley: That is just about half.

Mr. Benson: Yes, sir.

Mr. Mullen: Have you tried those electric machines for spraying the metal on in making repairs?

Mr. Benson: Yes, sir, we have tried it.

Mr. Mullen: I wonder what results you got from it.

Mr. Benson: If you get all the elaborate machinery that they want you to get with that it is very expensive. We tried it right after I came to the Erwin Mill. A local machine shop had this equipment for spraying metal on. We took out some starch rollers and sent them down there, and he tried to spray the metal on there, but it was not successful. It stands to reason that when you spray that metal on there you are only leafing it on. There is no bond there between the parent metal and the metal that is put on.

F. E. Bozeman, Jr., Works Mgr., Whitin Machine Works, Southern Repair Shop, Charlotte, N. C.: We use a ton and a half of metal a week for that.

Mr. Benson: Do you believe that you get actual bond between the parts you metallize?

Mr. Bozeman: No. You have to prepare that metal.

Mr. Benson: I understand that.

Mr. Bozeman: You have to rough it up first. The metal is sprayed on these under 60 pounds pressure. It does not form a metal bond, as a weld does, but we have never had any trouble with its cracking. We use Spray Sheet No. 20, which is hard steel. We also use No. 10. We also have some brass rods, which we fortunately got about two years ago. We have never had any complaint

from any of the mills about this metal's peeling or cracking. Of course, we grind it.

Mr. Benson: You do not tool it; you grind it?

Mr. Bozeman: Yes.

Mr. Benson: Couldn't you tool it with stellite?

Mr. Bozeman: You would not get any production.

Mr. Benson: How small parts do you repair?

Mr. Bozeman: Down to spinning spindles. Sometimes they wear flat on one side.

Mr. Benson: What is the porosity of that thing after you grind it? Is it porous?

Mr. Bozeman: No. It is of a little different color. You can tell where it is.

Mr. Benson: We have had that experience with welding.

Mr. Bozeman: We have not had any trouble with it at all. We repair all of our studs and shafts with it.

Mr. Benson: Anything like that, that will cut down your cold-rolled-steel replacements, is certainly worth something.

Mr. Tatum: What does that outfit cost?

Mr. Bozeman: It costs about a thousand dollars. That is, it did about two years ago. I do not know what it would cost now, if you could get it.

Chairman Gilliam: I doubt if you could get it.

For the benefit of you gentlemen, I might say that Mr. Bozeman is at the Whitin Shop in Charlotte. He knows all the answers, so if you gentlemen want to ask any questions, here he is.

Mr. Benson: If there are no other questions anybody wants to ask, I think I have done my part.

Chairman: Thank you, Mr. Benson. We have enjoyed your talk, and it has been very helpful.

Mr. Bozeman, is there anything further you would like to say?

Mr. Bozeman: Nothing, Mr. Chairman, except that I was interested in what the gentlemen said about the expense of the shop in a mill.

Mr. Benson: They think the machine shop is a necessary evil in the production of cloth.

Mr. Bozeman: In regard to making gears, assuming that the gear shaper was all set up to cut that gear, it would cost you about $5.50. If it is not set up, it would cost you about 20 cents to set it up. But if you can make a $10 gear for $5.50 you have made a little money.

Have you ever tried case-hardening cold rolled steel?

Mr. Benson: Yes.

Mr. Bozeman: Did you get a good case-hardening?

Mr. Benson: I got a good skin hardening.

M. R. Harden, Supt., Mill No. 4, Erwin Cotton Mills Co., Durham: You know the little gear that is pinned onto the side of the big gear on a Draper loom? I do not know about other makes. That little gear will wear first. In our mill Mr. Benson just cuts that little gear off and makes another one and pins it on. That saves the big

gear. I have never seen it in weaving, and I do not know how it works, but there is a saving there.

Chairman Gilliam: That is a good idea.

Mr. Benson: I can tell you how it works. We knock off that little gear with a hammer, and we get about 25 or 30 of them together, so as to keep a man busy for about an hour. We make the gears and screw them on. We have just about gotten over the mill, replacing those cast-iron gears with steel ones. The steel gears are now beginning to come back completely worn out. I do not know what that little gear costs.

Mr. Harden: The big element of cost is that you have to buy the big one with the little one.

Mr. Benson: We make those gears out of scrap, so the cost of the material is nothing.

Mr. Benson: Mr. Chairman, who decides whether or not a part is worth being reclaimed?

Chairman: Maybe some of these gentleman can tell you.

Mr. Benson: We had a showdown on that some weeks ago. It is up to the foreman of the room and the head fixer and the fixer who took off the broken part to determine whether or not that part is worth reclaiming. When they pass on it and decide that it should be reclaimed, it comes to the shop; then it is up to us to do the best we can on it. If we think that it cannot be fixed economically we sometimes throw it out, but it has gotten to the point now that when a part breaks the fixer comes with it to the shop and sits down and waits for it and takes it back, because the stock is getting rather slim. When your overseers or fixers tell you that they cannot run welded equipment or repaired equipment they do not know what they are talking about, because we are doing it every day. I think when the war is over and we can get supplies again we shall nevertheless keep on reclaiming broken ones.

(*Continued in next issue*)

More Mills Added To Roster of Cotton-Textile Institute

Additions to the membership roll of The Cotton-Textile Institute have been announced as follows:

Marion Mfg. Co., Marion, N. C.; Nelson Cotton Mills No. 2, Whitnel, N. C.; Algodon Mfg. Co., Bessemer City, N. C.; Howell Mfg. Co., Cherryville, N. C.; Dacotah Cotton Mills, Lexington, N. C.; Edinburgh Cotton Mills, Raeford, N. C.; Mansfield Mills, Lumberton, N. C.; Caldwell Cotton Mills, Lenoir, N. C.; Jones Mfg. Co., Humboldt, Tenn.

Arkeka Webbing Co., Pawtucket, R. I.; Bur-Bar Narrow Fabric Co., Valley Falls, R. I.; Gordon Mills, Roaring River, N. C.; Grier Mills, North Wilkesboro, N. C.; Paola Cotton Mills, Statesville, N. C.; Richmond Hosiery Mills, Rossville, Ga.; Blair Mills, Belton, S. C.; Piedmont Cotton Mills, Eagan, Ga.; Saratoga-Victory Mills, Albertville, Ala.; Pennsylvania Ribbon Manufacturers, Philadelphia; Klein & Co., Philadelphia; Ingram Spinning Mills, Opp, Ala.; Pickett Cotton Mills Co.; Opp Cotton Mills, Opp, Ala.; Hall-Kale Mfg. Co., Troutman, N. C.

The Importance of Good Ginning to the Spinning Industry

(*Continued from Page 12*)

all of which cause a tangling of the fibers, possible damage to them, a roughening of sample preparation, and a lowering of grade. This damage is somewhat similar to the damage caused by excessive cleaning in the mill, in that fibers may be weakened or broken, with the result that the damaged fiber adds to the wasty material already present in the original bale, and decreases the uniformity of the staple.

The presence of undue quantities of short fibers will prevent the formation of a smooth uniform strand of yarn, because these short fibers are not evenly "drafted" in the various processes used in yarn manufacture. In turn, this may eventually cause end breakage in running through some successive operation of manufacture. Increasing production cost again results, this time from unevenness of staple.

Since this non-uniformity in staple is of such paramount importance to the spinner, it is also incumbent upon the ginner to do his part in the preventing of mixed-packed bales, in which noticeably different staple lengths are packed in the same bale. Such mixed-packing creates trouble for the spinner.

There is still another unfavorable effect from the lack of uniformity in staple length, that is, from the standpoint of variation between bales or from one crop year to another in the same locality. Setting the machinery and the organization in a spinning mill for a certain cotton or type of raw stock is a considerable task. Mills, therefore, attempt to keep their raw material as even running as possible. The ginner enters the picture here in the care he takes in not mixing planting seed at the gin. In view of the expense and trouble incident to changing machinery to handle different raw cottons, this problem is more important perhaps than many ginners realize. Furthermore, since the damage to staple uniformity caused by mixing of planting seed at the gin is not immediately apparent, it is a problem frequently overlooked by both the farmer and the ginner. A little broader view of the matter, however, will bring out the fact that a community with the reputation of producing uniform bales year after year will find a more ready market for its cotton crop than one which is not so reliable in this respect. The "One Variety Community" program launched by Federal and State agencies in recent years is largely based upon this important fact.

Quality of the Manufactured Goods

So far the discussion has been limited to the effects on initial and manufacturing costs of undesirable elements in lint cotton. In addition to the cost problem, poor ginning and its resultant poor quality of lint affect the quality of the manufactured goods considerably. It is sometimes difficult to separate these factors, since many or most of the elements which raise cost also lower quality. The same causes of unevenness, weakness, neppiness, etc., in the partially completed material at various stages of manufacture, are also responsible for defects in the final product, as these imperfections are carried along into the yarns and fabrics.

Trash and other imperfections that are not removed by

the cleaning operations will eventually appear as dark specks, neps, or uneven places in the yarn and cloth. If the material undergoes the additional process of dyeing, these defective places may react to the dye differently from the bulk of the goods, resulting in spotty, streaky, or vari-shaded materials. Naturally, such a product has a considerably reduced market value from one of first quality. Properly ginned, clean raw cotton of fairly uniform staple length affords much less opportunity for such undesirable results than cotton that has been poorly ginned.

This matter of yarn appearance and evenness is of such importance in the trade that the United States Department of Agriculture has expended considerable research effort in developing the standards or grades of yarn appearance which recently have been established. By comparing the appearance of yarn wound on small black boards with that of certain photographic standards, it is possible to give a definite grade or evaluation to a yarn, and so afford a relatively accurate description of the yarn with respect to its appearance.

Many of the same cotton quality factors that affect the appearance of finished goods also affect the strength and uniformity of strength of such manufactured products. There is, of course, nothing the ginner can do to increase the inherent strength of the cottons which come to him, but by proper drying when needed, and by adequate cleaning and smooth ginning, he can certainly retain to a large extent the fiber properties which will serve to produce strong yarn. An inherently weak-fibered cotton will produce a relatively weak yarn regardless of how carefully it is handler prior to ginning and spinning. However, it may be made considerably worse by improper handling.

Conversely, a strong-fibered cotton, if ginned properly, will retain its good qualities, and enable the spinner to produce the optimum strength in his yarns and fabrics that is obtainable from that particular cotton. Poor ginning in such a case, however, may easily destroy to a large extent the inherent advantages of this cotton, with the result that the final product of the spinner's art perhaps would be no better than that produced from the weak cotton previously mentioned. Such poor ginning might even have the effect of destroying the original staple uniformity, causing unevenness in the strength of the yarn. In mechanical fabrics especially, for example, it is the weak places in the yarns and thread which give trouble, the occasional occurrence of strong places being of little or no value.

Experiments conducted by the United States Department of Agriculture indicate that improper use of driers at excessively high temperatures may damage the strength of the fibers by "baking." Such fibers are, of course, detrimental in the spinning because they decrease the strength and other qualities of the product. Driers should not, therefore, be operated at temperatures above those recommended. If ginners do not know what these are, they should get in contact with their State gin extension specialist or write to the United States Cotton Ginning Laboratory at Stoneville, Miss.

Other tests involving gin saws of different finenesses, pitches and shapes, indicate that while somewhat closer ginning than is the general custom sometimes may be done without detriment to the sample, this can be carried to an extreme and cause harm to both the cotton and the

spinner. In such cases, the additional short, unspinnable fiber ginned from the seed increases the amount of waste removed during the manufacturing process, and the increased presence of seed coat fragments serves as hindrances and sources of trouble to the spinner. The extra turnout gained by such practices, therefore, while bringing a slight increase in the weight of the bale is more than offset by a loss in staple, since the classes will likely call such a bale wasty, and consequently penalize the staple length.

The U. S. Department of Agriculture has also conducted experiments on bale packaging involving the use of different kinds of ties and bagging. While some spinners have occasionally complained that sisal and jute fibers adhere to the cotton, causing trouble in the mill, this is probably more of a psychological problem than a real technical one, since such a mixture of fibers can occur only on the surface of the bale, and in relatively minute quantities.

Studies have been made in "bale cutting," the term frequently given to those cuts or "blowouts" which sometimes occur in a bale during compressing. Spinning tests made in the United States Department of Agriculture Spinning Laboratory on such cut bales have indicated a perceptible but not important increase in spinning waste over the uncut bales. The manufacturing performance of the cut cotton and strength and appearance of the yarns were only slightly less satisfactory than those for cotton of the same quality not cut. The ginner's responsibility in this matter lies principally in avoiding the packaging of oversize and uneven bales, since such bales are more susceptible to cutting than are the standard sized ones.

It can be said, too, that on a basis of results obtained in the spinning laboratories of the Agricultural Marketing Administration, even the most extensive use of modern complex cleaning and extracting equipment prior to ginning will not produce from roughly harvested seed cotton, ginned lint and spinning results of a quality comparable with that obtained from minimum cleaning equipment on carefully hand-picked seed cotton. In like manner, a commercial cotton spinner cannot take a poorly ginned sample of lint and manufacture from it a yarn or fabric of the highest quality regardless of how modern or elaborate his textile equipment may be.

From the foregoing, it is evident that the ginner should consider these matters carefully and more especially so, since what affects the utility and marketability of his customer's cotton directly affects his business as well. Too, during these days when so much stress is being put upon National Defense, a large part of the textile output is going into military and naval needs and rigid specifications have been established by these services for their purchases. The cotton spinner must meet them to fulfill his contracts. And, because of the importance of good ginning to the producers and users of American cotton the ginner can help, thus enabling the farmer and spinner to meet necessary requirements and fulfill their contracts. To this end, therefore, each and every ginner has an opportunity to take part in and to assume his share of responsibility in the affairs of Southern agriculture, the cotton textile industry, and National Defense, at a most critical time when help and continuity of effort are needed for the mutual benefit of all concerned.

Reminiscences of Ye Olde Cotton Factory

(*Continued from Page 14*)

"What's your name?" "Mack. What's yours?" "Ed."

And a new friendship began that has grown and strengthened through more than half a century of work, taking the tasks assigned them, mastering one after another, sharing burdens and boyish fun, gaining knowledge and experience, pushing on through all the different rooms, advancing in skill as in years until at the age of maturity were capable of filling overseers' places and, too, were able to take a part in the affairs affecting the welfare of the community.

Reared in Christian homes it was natural to be trained up in Sunday School activities and develop into teachers, choir directors, even Sunday School superintendents and become examples of right living, a clear indication that hard, honest work, clean living, has made a mighty army of this same type of Golden Rule citizen as well as an acceptable overseer.

These two boys represent quite accurately the type of the Southern pioneer textile overseer. His program was filled with a tremendous variety of experience which placed him in the position of supervisor, instructor, and adjuster. He was the "balance wheel" between management and the operatives, responsible to the one for profitable results, care of equipment and all economical transactions to the other for safety, a fair work load, comfortable working conditions, correct time and wage schedule. So with whole-hearted teamwork on every corner, these two forces still stand at the "head of the class and represent a combination of principles to work and play and live by and for, that have brought the old time overseer with his "beloved gang" of co-operators through these years of incomprable history making, handing over to "textile posterity" the immense volume of invaluable lessons learned in the school of true experience and honest effort that will survive all the theories in existence.

It has been a source of wonder that so many of the people who began working in the mill at an early age, and who were able to make 66 hours week after week for months and live to the ripe old age of 80 and above.

They lived very simply, had plenty to eat, plenty of rest and sleep, worked when they worked, played when they played and rested when rest time came, and frowned vigorously on dissipation.

The youngsters never appeared tired or drowsy when it was "doff time," and it was a race to the first frame.

The old style "bobbin wrap" was used in doffing a spinning frame. This was accomplished by grasping and pulling the full bobbin of yarn from the spindle with the left hand, holding suspended, picking up the empty bobbin from the doff box with the right hand, wrapping the yarn around the empty bobbin, placing empty bobbin on spindle, breaking end for yarn from full bobbin in doff box. These operations required an extraordinary amount of skill, and a high order of intelligence, and were also quite interesting to the majority of the small boys who became destined to engage in them.

An enormous amount of practice was necessary to become a good doffer and hold his place in the "gang." It sometimes happened that the doffers were called on during a rest period between doffs to open up a "run" of cotton in the opening room (18 to 12 bales) and it was very much like turning so many young ducks into a lake. They

gathered up the cotton from the bales by the armload and scattered it over the floor of the mixing bin until the entire lot was thoroughly mixed reading for "aging," 24 to 48 hours before being used. The doffers always welcomed a chance to open cotton. At other times the colored help would be called in to do this work.

Owing to the lack of convenient appliances for machinery then in use many tasks had to be performed by hand. Every producing machine throughout the mill was equipped with three main factors, viz: the "feed," which started the stock into a machine, the "working" parts which changed the stock in the State for which machine was intended, and delivery of finished product on that machine.

Consequently, it is clear that each machine delivered its product to a container which, for a lapper was a "lap rod," for a card, a can, also for drawing, for flyer frames, spinning and twister frames, a bobbin, hence the doffing problem. The "feed" was known as creeling—placing a full container of stock on the back of machine when the old one ran empty. This task was performed by hand and always by the tender, except in a few cases where gangs were used to change an entire creel.

The evolution of the spinning frame has brought into use a type of spindle that enables the doffer to more than double the amount of doffing in a given time.

All these performances, along with all the auxiliary duties associated with them, viz: sweepers, oilers, roving haulers, filling and quill haulers, while not burdensome, yet required a strict attention to business, the enormous amount of "practice" turned out a type of truly efficient textile workers that eclipse their successors in spite of automatic appliances, and many of those old girls and boys of the '80s and '90s spooled and warped, oiled, stripped and ran cards and lappers and slubbers and speeders still survive and are able to sit around together and talk about the "young days," hum the old songs, enjoying the quiet, serene afternoon of a clean, honest, well spent life, just waiting for the summons to their eternal reward.

(To be continued)

Testing Co. Opens Branch in South America

The United States Testing Co., Inc., is sending representatives to Brazil, South America, to handle the inspection and testing, at the source, of large quantities of materials purchased by concerns here in the United States.

A. O. Silva, for the past ten years assistant manager of the Chicago Branch of the Testing Co., is leaving the week of May 11th to take charge of the Testing Co.'s activities in South America. Mr. Silva will make his headquarters at Sao Paulo, Brazil.

With the cut-off of many raw materials such as burlap, sisal, cocoanut oil and others, more and more manufacturers here in the States are looking to South America for replacements. The representatives of the United States Testing Co. will devote their time, for the present, immediate problems of investigating and standardizing various Brazilian products for adaption to the market needs of this country.

The Effect of Cotton Control

(*Continued from Page 9*)

ton shortage occurs. They should understand that not all cotton can produce any kind of goods. They should understand that unless the cotton farmers of the South produce a good-sized crop of good-quality cotton this summer, there will be created a situation which will be most onerous when harvest time comes in the fall, not to mention the shortage of white cotton which is likely to be experienced before another crop is ready to pick.

Discussions are under way looking toward the proposition of the Government swapping some good-grade cotton for some low-grade cotton that is in the hands of shippers or farmers in order to relieve the shortage situation in white cotton. This may be of some small aid, but the situation is such that the amount of help thus obtained will be but a drop in the bucket.

More cotton acreage this year is the crying need. Mr. Wickard apparently cannot see the forest for the trees.

Manhattan Rubber Wins Advertising Award

For the second consecutive year, The Manhattan Rubber Mfg. Division of Raybestos-Manhattan, Inc., Passaic, N. J., has won a national award for its advertising campaign.

At the annual convention of the National Advertising Agency Network, held in St. Louis, Mo., May 28th, 29th and 30th, the campaign entered in the Best Business Paper campaign competition by Manhattan was chosen the best in its class.

Conservation of rubber and rubber goods was the keynote of the campaign. The advertising was prepared to fulfill two purposes: (1) the care of rubber equipment so that the user would have longer wear and longer service, (2) the request to salvage and turn in all unused rubber so that it might be reclaimed and help increase the stockpile of usable rubber.

Fifty-one industrial publications, including a number of consolidated catalogs, were used during the campaign. Co-ordinated with the advertising in these media was a series of direct mail pieces, bulletins, calendars, instruction tags and wall cards for proper care of rubber goods, divident enclosures and a house organ.

The "Why" of Army Woolen Weights

Probably the question asked most often about Army clothing, says the War Department, concerns the reason for the woolen weights of the various fabrics used for enlisted men's overcoats, coats and trousers.

The answer of the Quartermaster Corps, which supplies these items to the Army, is brief and to the point. The weights of the several woolen fabrics are based upon many years' experience and exacting tests under all conceivable weather conditions. They are designed to serve an all-round purpose.

The overcoat is made from a 32-ounce melon. This coat is satisfactory for service throughout the continental United States, and with the addition of other garments, is ideal for use in most of the cold climate areas encountered by our troops here or abroad.

Other nations, with very cold climates, utilize heavier fabrics. The Russian Army, for example, issues an over-

coat of 36 to 38 ounces.

Quartermaster clothing designers are proud of the 18-ounce serge, all-purpose fabric used for soldiers' clothing. Probably it is no exaggeration to say that it makes the best-looking, longest wearing coats and trousers now being worn on any battle front. And incidentally, it is lighter in weight than any cloth used by this country in any previous war. The British prefer a somewhat heavier material with weight around 20 ounces, for use in those sections of the British Isles which continually are swept by chill fogs and drenching rains. The Russians also require an 18 to 20-ounce fabric.

Many commercial clothing designers have suggested that it would be practicable to develop a 16-ounce serge which could be used to advantage in the warmer sections of continental United States. However, a heavier weight garment would be required for the cold climate areas, for use of troops abroad and probably in the northern half of the United States. From a supply viewpoint, having regular issue coats and breeches of two weights is considered impracticable under existing conditions.

Twitchell Presents Burlap Substitute

E. W. Twitchell, Inc., Philadelphia, are manufacturing a burlap substitute of tightly twisted Kraft paper, which deteriorates relatively little over an extended period under usual conditions, and which has evidenced sufficient strength to successfully contain and ship 100 pounds of potatoes or other products when properly made into bags. Its tight twist and treatment in preparation gives a reasonable water-repellency which has served satisfactorily for many purposes.

The company is supplying this material for agricultural bags, baling of all kinds, manufacturers of various novelties for which burlap has been used in the past, and in fact, it is being used or tried for just about every purpose where burlap has been previously employed.

Threads of a Nation

A 16 millemeter copy of "The Threads of a Nation," a film short in natural color depicting the evolution of cotton from raw material to the finished products, has been reconditioned and improved and is being reissued by the Cotton-Textile Institute.

Over the last two years the film in its original form was shown in hundreds of theaters and before various civic and social organizations. It gives a picture of the many-sided activities incident to the marketing and processing of the cotton crop which now constitutes a basic material for prosecution of the war effort.

The film will be released on request to trade organizations and civic bodies for special showings.

Exhibition of Hand Woven Fabrics

On Friday, May 8th, the Textile Department of the Georgia School of Technology presented a display of hand woven materials and articles. Most of these were made at the School, and included several types of rugs, towels and luncheon sets. Also included were products of several commercial hand weaving establishments, and a collection of spreads and coverlets of colonial design, some of which being as much as one hundred years old.

TEXTILE BULLETIN'S SEMI-MONTHLY DIGEST of WHAT'S NEW in MILL EQUIPMENT, SUPPLIES, BOOKLETS

Ciba Co. Announces Perfection of Radul

The Ciba Co., Inc., of Greenwich and Morton streets, New York, have perfected a new delustering and softening agent for synthetic fibres. This product, called Radul (pronounced "ray-dull") assures retention of the proper dull effect on synthetic fibres in piece goods and hosiery, the manufacturer declares. In fact the dulling effect is magnified because of the excellent dispersion and exhausting properties of this new chemical compound.

The age-old problem of settling out and consequent spotting is reduced to a minimum when this new agent is used. Additional softening agents are unnecessary with the resultant effect that the lusternig and softening of synthetic fibres can be controlled in all piece goods and hosiery, it is further claimed.

Further information may be secured by writing to the Service Technicians, Dept. C, Ciba Co., Inc., Greenwich and Morton streets, New York City.

Foxboro Bulletin Describes Liquid Density Recorders

Instruments for the automatic measurement and recording of densities of process liquids are described and illustrated in Bulletin A-264, just issued by The Foxboro Co., Foxboro, Mass. Copies will be sent on request.

In place of periodic readings by hydrometer and still samples, the Foxboro Density Recorder records the continuous, direct measurements of the flowing liquid. For processes where automatic control of density is important for operating efficiency, the Foxboro Stabilog Density Controller is supplied. The instruments have identical measuring systems and both use standard Foxboro charts, which may be read in specific gravity, Baume, Brix or other recognized scales. Charts may be read to small unit values, and the accuracy of the measuring and recording is not affected by turbulence, viscosity or by foam. Installation of either instrument is relatively simple. Auxiliary equipment for the installation is also shown in the bulletin.

Data On "An-Cor-Lox" Lock Nuts

A comprehensive folder on An-cor-lox Lock Nuts has just been issued by the manufacturers, An-cor-lox Division, Laminated Shim Co., Inc., 86 Union Street, Glenbrook, Conn.

The folder is replete with diagrammatic, photographic and factual matter on An-cor-lox styles, materials, designs and finishes; application instructons; and suggestions for parts conversion to the An-cor-lox function.

The An-cor-lox Nut itself is self-contained, with all-metal construction, and is devised both for extreme locking security, and speed and ease in applying. Besides being re-usable, the An-cor-lox is remarkable in that its locking power actually increases with repeated re-use. An-cor-lox Nuts are offered in a full range of sizes and metallic alloys to meet virtually all service conditions of atmosphere, temperature, endurance, vibration and shock.

Copies of the interesting An-cor-lox folder may be obtained by writing us—or the manufacturers direct.

Wall Card On Care Of Rubber Belts

A useful wall card which gives complete instructions for the proper installation and care of rubber transmission belts, V-belts and conveyor belts has been prepared by The Manhattan Rubber Mfg. Division of Raybestos-Manhattan, Inc., Passaic, N. J., in the interest of rubber conservation. The card, measuring 8¾"x11", has an eyelet for convenient hanging. It may be obtained from the manufacturer by requesting Form No. 6576.

This card is the third in a series issued by Manhattan Rubber in the current national campaign to save rubber, the first two cards being devoted to "The Proper Care of Fire Hose" and "The Proper Care of Rubber Hose" and are also obtainable. They are expected to make an important contribution toward conserving this vital product.

New Grab and Carrier

One of the newest developments of the Cleveland Tramrail Division of The Cleveland Crane & Engineering Co., Wickliffe, Ohio, is the motor-driven crate grab and carrier especially designed for handling crates and boxes in and out of storage, or from one elevation to another. The unit enables the quick stacking or removal of crates at a great height with safety. This makes possible faster handling, and also greater storage capacity of a given area.

The grab and carrier are completely motorized with all operations conveniently controlled by the six buttons of the push-button station. If desired this type unit can be provided with an operator's cab in which all controls may be located.

New Folder On Informative Labeling

Pacific Mills, cotton and rayon division, have recently published an interesting little folder, titled "How Can Informative Labeling on Fabrics Help Me Contribute to the War Effort?"

The folder contains a wealth of facts about the application of informative labeling, not only as applied to the Pacific Factag, but to the patriotic question of how the housewife at home can help the war effort.

Copies of the folder will be sent on request to any educational class, consumer group, retail store or industrial consumer, upon request to Pacific Mills, 214 Church St., New York City.

Photoswitch Protection Systems

Photoswitch, Inc., announces an addition to their line of photo-electric protective systems, Type O28L Control for outdoor and indoor use over very long ranges.

The light source projects a practically invisible light beam for distances of 350 to 700 feet and it is possible to completely surround power plants, defense factories, and other vital areas. If the light beam is broken by intruders or saboteurs, the photo-electric control contacts close, thereby sounding alarms, operating a central station system, turning on flood lights, closing gates, etc.

The control is provided with a latching unit including a push button station which may be located in the gate house, office, or other convenient point. This serves to latch the alarm in operation once the light beam has been momentarily broken until the reset button is operated.

The Photoswitch is unaffected by changes in local light and is designed to operate 24 hours a day. The relay contacts are pure silver and will handle 15 amps. A.C. and 8 amps. D.C. Control operates from 115 volts A.C. source of supply.

Defense

Keep your temper, gentle sir,
Writes the manufacturer.
Though your goods are overdue
For a month and maybe two,
We can't help it, please don't swear
Labor's scarce and steel is rare,
Can't get zinc, can't get dies.
These are facts—we tell no lies.
Johnny's drafted, so is Walt,
So it isn't all our fault;
And your order, we're afraid
May be still a bit delayed.
Soon you'll get it, don't be vexed,
Maybe this month, maybe next.
Keep on hoping, don't say die,
We'll fill your order bye and bye.

—Selected.

New Ceiling for Wide Osnaburgs

Ceiling prices for wide osnaburgs, used chiefly for bagging, have been lowered by Price Administrator Leon Henderson by placing them under the provisions of Revised Price Schedule No. 35 (Carded Grey and Colored Yarn Goods) and removing them from Maximum Price Regulation No. 118 (Cotton Products).

The effect of this Amendment No. 4 to Price Schedule No. 35 is to bring osnaburgs in widths of 42 inches and over into line with maximum prices for osnaburg less than 42 inches wide. A differential of 10 per cent over the narrow goods, which represents the customary trade practice, is established by the change. The amendment became effective May 30, 1942.

Office of Price Administration examination of quotations for wide osnaburgs during the base period established by Regulation No. 118 disclosed that prices charged at that time exceeeded the ceiling prices for narrow widths of osnaburg by considerably more than the usual differential, according to the Administrator. OPA officials have consulted with representatives of the principal producers of osnaburg in order to work out specific prices to be incorporated in Regulation No. 118.

"Producers of wide osnaburgs are in agreement with the Office of Price Administration that, regardless of the ceiling price for wide osnaburgs which results from maximum prices for them based on the ceilings for narrow osnaburgs," said Mr. Henderson.

The discrepancy between the ceiling price for narrow osnaburgs and the market price for the wider widths of this construction was due to the fact that prices for the former had been reduced as a result of the issuance of Price Schedule No. 11 late in June, 1941. The wide osnaburgs remained at or above the high levels which had prevailed prior to the issuance of that schedule.

This amendment also rectifies an error in the computation of the price for 2.70 yard sanforized denim as originally issued on April 8, 1942, through Amendment No. 1 to Revised Price Schedule No. 35. The price was ¼ cent per yard lower than it should have been and this is corrected to read "19.00" instead of "18.75" cents per yard.

War Regulations Folder Issued By Cotton-Textile Institute

The Cotton-Textile Institute has issued to its members a loose-leaf folder containing a compilation of War Production Board priorities, preference ratings, conversion orders and all other regulations, as amended to date, that bear directly on cotton manufacturing. Most of the orders and directives are photographic reproductions from the Federal Register.

The folder has six main divisions: (1) Official documents establishing the WPB; (2) a description of the priorities and allocations system together with copies of basic regulations; (3) specific blanket preference rating orders affecting the procurement of textile mill supplies; (4) General Preference Orders restricting materials either made or used by cotton mills; (5) Conservation Orders; (6) Limitation orders, the most important being L-99 covering conversion of looms to bag fabrics.

Southern Sources of Supply

For Equipment, Parts, Material, Service

Following are the addresses of Southern plants, warehouses, offices, and representatives of manufacturers of textile equipment and supplies who advertise regularly in TEXTILE BULLETIN. We realize that operating executives are frequently in urgent need of information, service, equipment, parts and materials, and believe this guide will prove of real value to our subscribers.

ACME STEEL CO., 2838 Archer Ave., Chicago, Ill. Sou. Office and Warehouse, 603 Stewart Ave., S.W., Atlanta, Ga., F. H. Webb, Dist. Mgr. Sou. Sales Reps.: C. A. Carrell, 523 Clairmont Ave., Decatur, Ga., Phone Dearborn 6267; G. R. Easley, 107 Manly St., Greenville, S. C., Phone 1610; William G. Polley, 937 Cherokee Lane, Signal Mountain, Tenn., Phone Chattanooga 8-2635; John C. Brill, 309 Magazine St., New Orleans, La., Phone Magnolia 5859. Warehouses at Atlanta, Ga., Greenville, S. C., New Orleans, La.

AKRON BELTING CO., THE, Akron, O. Sou. Reps.: The Akron Belting Co., 15 Augusta St., Greenville, S. C.; The Akron Belting Co., 406 S. 2nd St., Memphis, Tenn.

ALLEN CO., 440 River Road, New Bedford, Mass. Sou Repr.: L. E. Wooten, Fort Mill, S. C.

AMERICAN CYANAMID & CHEMICAL CORP., 30 Rockefeller Plaza, New York City. Sou. Office and Warehouse, Wilkinson Blvd., Charlotte, N. C., Hugh Puckett, Sou. Sales Mgr. Reps.: John D. Hunter, E. H. Driver, Paul F. Haddock, Charlotte Office; E. J. Adams, 1404 S. 22nd St., Birmingham, Ala.; Jack B. Button, 610 N. Mendenhall St., Greensboro, N. C.; C. B. Suttle, Jr., 423 Clairmont Ave., Decatur, Ga.; K. E. Youngchild, 10 South St., Mobile, Ala.

AMERICAN MOISTENING CO., Providence, R. I. Sou. Plants, Charlotte, N. C., and Atlanta, Ga.

AMERICAN VISCOSE CO., 350 Fifth Ave., New York City. Sou. Office, Johnston Bldg., Charlotte, N. C. Harry L. Dalton, Mgr.

ARKANSAS CO., Inc., P. O. Box 210, Newark, N. J. Sou. Repr.: Jasper M. Brown, 1204 Greenwood Cliff, Charlotte, N. C.

ARMSTRONG CORK CO., Industrial Div., Textile Products Section, Lancaster, Pa. Sou. Office, 33 Norwood Place, Greenville, S. C. J. V. Ashley, Sou. Dist. Mgr.

ASHWORTH BROS., Inc., Charlotte, N. C. Sou. Offices, 44-A Norwood Place, Greenville, S. C.; 215 Central Ave., S.W., Atlanta, Ga.; Texas Rep.: Textile Supply Co., Dallas, Tex.

ATWOOD MACHINE CO., Stonington, Conn. Sou. Rep.: Fred Sails, Johnston Bldg., Charlotte, N. C.

AUFFMORDT & CO., C. A., 468 Fourth Ave., New York City. Sou. Rep.: George B. Wilkinson, 613 Johnston Bldg., Charlotte, N. C.

BAHNSON CO., THE, Winston-Salem, N. C.

BANCROFT BELTING CO., Boston, Mass. Warehouse and Sou. Distributor, Carolina Supply Co., Greenville, S. C.

BARBER-COLMAN CO., Rockford, Ill. Sou. Office, 31 W. McBee Ave., Greenville, S. C., J. H. Spencer, Mgr.

BARKLEY MACHINE WORKS, Gastonia, N. C.

BARNES TEXTILE ASSOCIATES, Inc., 10 High St., Boston, Mass. Sou. Office, 511 Johnston Bldg., Charlotte, N. C.

BAY STATE TEXTILE CO., 220 Hartwell St., Fall River, Mass. N. C. Agt., John Graham Webb, P. O. Box 344, Hillsboro, N. C. Phone 127-B.

BECCO SALES CORP., Buffalo, N. Y. Sou. Reps.: J. D. Quern and D. S. Quern, 1930 Harris Road, Charlotte, N. C.

BEST & CO., Inc., EDWARD H., Boston, Mass. Sou. Rep.: W. C. Hames, 185 Pinecrest Ave., Decatur, Ga., Phone Dearborn 5974; Ralph Gossett, William J. Mooré, 15 Augusta St., Greenville, S. C., Phone 150.

BORNE, SCRYMSER CO., Works and Offices, 632 S. Front St., Elizabeth, N. J.; Warehouse, 815 W. Morehead St., Charlotte, N. C. Sou. Mgr., H. L. Siever, Charlotte, N. C. Reps.: W. B. Uhler, Spartanburg, S. C.; R. C. Young, Charlotte, N. C.; John Ferguson, LaGrange, Ga.

BRADLEY FLYER & REPAIR CO., 1318 W. Second Ave., Gastonia, N. C.

BREWERTON, E. H., 1019 Woodside Bldg., Greenville, S. C.

BROOKLYN PERFEX CORP., Brooklyn, N. Y. Sou. Repr.: John Batson, Box 841, Greenville, S. C.

BROWN CO., THE DAVID, Lawrence, Mass. Sou. Reps.: Greenville, S. C., Ralph Gossett and Wm. J. Moore; Griffin, Ga., Belton C. Plowden; Dallas, Tex., Russell A. Singleton Co., Inc.; Gastonia, N. C., Gastonia Mill Supply Co.; Chattanooga, Tenn., James Supply Co.; Spartanburg, S. C., Montgomery & Crawford.

BRYANT ELECTRIC CO., 625-27 E. Franklin Ave., Gastonia, N. C.

BURKART-SCHIER CHEMICAL CO., Chattanooga, Tenn. C. A. Schier, W. A. Bentel, W. J. Kelly, Jr., George S. McCarty, T. A. Martin, George Rodgers, care Burkart-Schier Chemical Co., Chattanooga, Tenn.; H. V. Wells, care Burkart-Schier Chemical Co., Nashville, Tenn.; Lawrence Newman, Claude V. Day, care Burkart-Schier Chemical Co., Knoxville, Tenn.; J. A. Brittain, 845 S. 41st St., Birmingham, Ala.; Nelson A. Fisher, 1540 Elmdale Ave., Chicago, Ill.

CAROLINA REFRACTORIES CO., Hartsville, S. C.

CARTER TRAVELER CO., Gastonia, N. C. R. D. Hughes Sales Co., 2106 S. Lamar St., Dallas, Tex., Texas and Arkansas; Eastern Rep. (including Canada): C. E. Herrick, 44 Franklin St., Providence, R. I.; European Rep.: Mellor, Bromley & Co., Ltd., Leicester, England.

CHARLOTTE CHEMICAL LABORATORIES, Inc., Charlotte, N. C. Peter S. Gilchrist, Jr., Rep.

CIBA CO., Inc., Greenwich and Morton Sts., New York City. Sou. Offices and Warehouses, Charlotte, N. C.

CLINTON CO., Clinton, Iowa. Sou. Reps.: Luther Knowles, Box 127, Phone 2-2486, Charlotte, N. C.; Grady Gilbert, Box 342, Phone 3192, Concord, N. C.; Clinton Sales Co., Inc., Geo. B. Moore, Box 481, Phone 822, Spartanburg, S. C.; Boyce L. Estes, Box 325, Phone 469, LaGrange, Ga.; Gordon W. Enloe, P. O. Box 351, Gadsden, Ala.; Harold P. Goller, 900 Woodside Bldg., Tel. 3713, Greenville, S. C. Stocks carried at Carolina Transfer and Storage Co., Charlotte, N. C.; Consolidated Brokerage Co., Greenville, S. C.; Bonded Service Warehouse, Atlanta Ga.; Textile Products Distributing Co., Rock Hill, S. C.; Industrial Chemicals, Roanoke Rapids, N. C.

COCKER MACHINE & FOUNDRY CO., Gastonia, N. C.

COLE MFG. CO., R. D., Newnan, Ga.

CORN PRODUCTS REFINING CO., 17 Battery Place, New York City. Corn Products Sales Co., Greenville, S. C., John R. White, Mgr.; Corn Products Sales Co., Montgomery Bldg., Spartanburg, S. C., J. Canty Alexander, Asst. Sou. Mgr.; Corn Products Sales Co. (Mill and Paper Starch Div.), Hurt Bldg., Atlanta, Ga., C. G. Stover, Mgr.; Corn Products Sales Co., 824-25 Southeastern Bldg., Greensboro, N. C., W. R. Joyner, Mgr.; Corn Products Sales Co., Comer B'dg., Birmingham, Ala., L. H. Kelley, Mgr. Stocks carried at convenient points.

CURTIS & MARBLE MACHINE CO., 72 Cambridge St., Worcester, Mass. Sou. Reps.: Greenville, S. C., 1000 Woodside Bldg., W. F. Woodward, Tel. 3336; Dallas, Tex., O. T. Daniels, care Textile Supply Co.; Philadelphia, Pa., 794 Drexel Bldg., J. A. Fitzsimmons; New York, N. Y., 200 Fifth Ave., F. C. Bryant.

CUTLER, ROGER W., 141 Milk St., Boston, Mass. Sou. Office, Woodside Bldg., Greenville, S. C. Sou. Agts.: M. Bradford Hodges, 161 Spring St., N.W., Atlanta, Ga.; Jesse Hodges, 1336 E. Morehead St., Charlotte, N. C.; Byrd Miller, Woodside Bldg., Greenville, S. C.

DARY RING TRAVELER CO., Taunton, Mass. Sou. Rep.: John E. Humphries, P. O. Box 843, Greenville, S. C.; John H. O'Neill, P. O. Box 720, Atlanta, Ga.; H. Reid Lockman, P. O. Box 315, Spartanburg, S. C.

DAYTON RUBBER MFG. CO., Dayton, O. Sou. Reps.: William L. Morgan, P. O. Box 846, Greenville, S. C.; J. O. Cole, P. O. Box 846, Greenville, S. C.; Thomas W. Meighan, 1149 St. Charles Place, Atlanta, Ga. Sou. Jobbers: Greenville Textile Supply Co., Greenville Belting Co., Greenville, S. C.; Textile Mill Supply Co., Charlotte, N. C.; Odell Mill Supply Co., Greensboro, N. C.; Young & Van Supply Co., Birmingham, Ala.; Industrial Supply, Inc., LaGrange, Ga.; Textile Supply Co., Dallas, Tex.; T. A. Sizemore, 323 Grove St., Salisbury, N. C.

DETERGENT PRODUCTS CO., 494 Spring St., N.W., Atlanta, Ga. Offices at: Columbia, S. C., Raleigh, N. C., Texarkana, Ark., Columbus, Ga.

DODENHOFF CO., W. D., 619 Rutherford St., Greenville, S. C. Sou. Reps.: John Ellison, Box 91, Greensboro, N. C.; Otis A. Zachary, Box 436, Atlanta, Ga.; Spencer W. Sparks, Chattanooga Bank Bldg., Chattanooga, Tenn.; T. Hunter Long, Box 485, Tampa, Fla.; O. L. Carter, 619 Rutherford St., Greenville, S. C. New England Sales Rep.: Herbert A. Derry, 94 Howard St., Melrose, Mass.

DRAPER CORPORATION, Hopedale, Mass. Sou. Offices and Warehouses, Spartanburg, S. C., Clare H. Draper, Jr.; Atlanta, Ga., 242 Forsyth St., S.W., W. M. Mitchell.

DU PONT DE NEMOURS & CO., Inc., E. I., Electrochemicals Dept., Main Office, Wilmington, Del.; Charlotte Office, 414 S. Church St., LeRoy Kennette, Dist. Sales Mgr. Reps.: J. L. Moore, Technical Man; N. P. Arnold, 2386 Alston Dr., Atlanta, Ga., Technical Service Man; O. S. McCullers, 208 McPherson Lane, Greenville, S. C., Tech. Repr.

EAGLE ROLLER REPAIR WORKS, Greenville, S. C.

EATON & BROWN, 213 Johnston Bldg., Charlotte, N. C.

EMMONS LOOM HARNESS CO., Lawrence, Mass. Sou. Plant, 118½ W. Fourth St., Charlotte, N. C., George Field, Mgr.; Clifton E. Watson, Mgr. Sou. Sales. Wm. S. Taylor, Supt. Charlotte Plant, Box 2036, Tel. 3-7503; Arthur W. Harris, Harris Mfg. Co., Agt., P. O. Box 1982, Phone Main 2643, Atlanta, Ga.; Alvin Braley, Southwest Supply Co., Agt., P. O. Box 236, Phone 170, Itasca, Tex.

ENGINEERING SALES CO., 217 Builders' Bldg., Charlotte, N. C., and Allen Bldg., Greenville, S. C.; S. R. and V. G. Brookshire.

FABREEKA PRODUCTS CO., 222 Summer St., Boston, Mass. Sou. Repr.: Wm. F. Lancaster, 676 S. Church St., Spartanburg, S. C.

FIDELITY MACHINE CO., 3908-18 Frankford Ave., Philadelphia, Pa. Sou. Reps.: John E. Fox, 1011 W. Palmer St., Charlotte, N. C.; R. C. Aycock, 911 Provident Bldg., Chattanooga, Tenn.

FISKE BROS. REFINING CO., LUBRIPLATE DIV., 129 Lockwood St., Newark, N. J. Sou. Repr.: J. Fred Welch, 1317 Lafayette Ave., Charlotte, N. C.; A. L. Day, 631 Spring St., N.W., Atlanta, Ga. Sou. Distributors: Tidewater Supply Co., P. O. Box 839, Norfolk, Va.; Tidewater Supply Co., Roanoke, Va.; Tidewater Supply Co., P. O. Box 212, Asheville, N. C.; Tidewater Supply Co., Columbia, S. C.; Chears Co., 631 Spring St., N.W., Atlanta, Ga.; Gastonia Mill Supply Co., Gastonia, N. C.; Jefferson Brick Supply Co., 2220 First Ave. South, Birmingham, Ala.; Knoxville Belting & Supply Co., 408 W. Jackson Ave., Knoxville, Tenn.; Noland Co., 115 Market St., Chattanooga, Tenn.; Turner Supply Co., St. Louis and Commerce Sts., Mobile, Ala.; Kennedy & Bowden Machine Co., 134 Third Ave., North, Nashville, Tenn.

FOSTER MACHINE CO., Westfield, Mass. Sou. Offices, 509 Johnston Bldg., Charlotte, N. C.

FRANKLIN PROCESS CO., Providence, R. I. Sou. Plants, Southern Franklin Process Co., Greenville, S. C.; Central Franklin Process Co., Chattanooga, Tenn.

FULBRIGHT LABORATORIES, Inc., 205-6-7 Latonia Bldg., Charlotte, N. C. C. O. Fulbright.

GASTONIA BELTING & SUPPLY CO., Gastonia, N. C.

GASTONIA BRUSH CO., Gastonia, N. C.

GENERAL COAL CO., 1217 Johnston Bldg., Charlotte, N. C., J. W. Lassiter, Sou. Sales Mgr.; Frank W. Reagan, Asst. Sou. Sales Mgr. Reps.: G. P. W. Black, Apt. A-2, Virginia Apts., Greenville, S. C.; H. G. Thompson, 97 Tacoma Circle, Asheville, N. C.; Guy H. Sowards, 421 N. Blount St., Raleigh, N. C.; Frank B. Crusan, 210 E. Franklin St., Office No. 5, Richmond, Va.; Dudley H. R. Wigg, 633 Wainwright Bldg., Norfolk, Va.; W. A. Counts, Res. Mgr., Law and Commerce Bldg., Bluefield, W. Va.; Dave B. Smith, Charlotte, N. C.; Combustion Engineer, E. H. Chapman, Charlotte, N. C.

GENERAL DYESTUFF CORP., 435 Hudson St., New York City. Sou. Office and Warehouse, 2459 Wilkinson Blvd., Charlotte, N. C., B. A. Stigen, Mgr.

GILL LEATHER CO., Salem, Mass. Sou. Reps.: Belton C. Plowden, Griffin, Ga., Tel. 125; W. G. Hamner, Gastonia, N. C., Tel. 229; Ralph Gossett, 15 Augusta St., Greenville, S. C., Tel. 150; Wm. J. Moore, P. O. Box 1523, Greenville, S. C., Tel. 150.

GOSSETT MACHINE WORKS, Franklin Ave., Ext., Gastonia, N. C.

GREENSBORO LOOM REED CO., Greensboro, N. C. Phone 5678. Geo. A. McFetters, Mgr., Phone 2-0265. A. A. "Red" Brame, Repr.

GREENVILLE BELTING CO., Greenville, S. C.

GULF OIL CORPORATION OF PA., Pittsburgh, Pa. Division Offices: Atlanta, Ga.—A. M. Wright, Greenville, S. C.; W. G. Robertson, Jr., Spartanburg, S. C.; J. H. Hooten, Gastonia, N. C.; R. G. Burkhalter, Charlotte, N. C.; G. P. King, Jr., Augusta, Ga.; Boston, Mass.; New York, N. Y.; Philadelphia, Pa.; New Orleans, La.; Houston, Tex.; Louisville, Ky.; Toledo, O.

H & B AMERICAN MACHINE CO., Pawtucket, R. I. Sou. Offices, 815 The Citizens and Southern National Bank Bldg., Atlanta, Ga., J. C. Martin, Agt.; Johnston Bldg., Charlotte, N. C., Elmer J. McVey, Mgr.; Fritz Zweifel, Fred Dickinson, Jim Miller, sales and service representatives.

H & P SPOOL & BOBBIN CO., Lawrence, Mass. Sou. Distributors: Textile Mill Supply Co., Charlotte, N. C., Tel. 5125-5126; Columbus Iron Works, Columbus, Ga.; Textile Supply Co., Dallas, Tex., Tel. 7-4729.

HART PRODUCTS CORP., 1440 Broadway, New York City. Sou. Mgr., Charles C. Clark, Box 274, Spartanburg, S. C. Sales Rep.: L. M. Boes, Box 517, Charlotte, N. C.

HOUGHTON & CO., E. F., 240 W. Somerset St., Philadelphia, Pa., W. H. Brinkley, Sou. Sales Mgr., 1301 W. Morehead St., Charlotte, N. C. Sou. Reps.: C. L. Elgert, 7 St. Paul St., Baltimore, Md.; T. E. Hansen, 414 N. Sheppard St., Richmond, Va.; S. P. Schwoyer, 507 N. Main St., High Point, N. C.; C. G. Schultze, 1301 W. Morehead St., Charlotte, N. C.; L. L. Brooks, P. O. Box 263, Griffin, Ga.; J. J. Reilly, 1830 Peachtree, Apt. No. 17, Atlanta, Ga.; H. J. Reid, 308 Hillcrest Ave., Decatur, Ga.; V. C. Shadden, 1821 Auburndale Ave., Chattanooga, Tenn.; J. W. Byrnes, 701 N. San Jacinto, Houston, Tex.; F. P. Hunt, 1301 W. Morehead St., Charlotte, N. C.; W. A. Isenberg, Lub. Engineer, 1301 W. Morehead St., Charlotte, N. C.

HOUGHTON WOOL CO., 253 Summer St., Phone Liberty 1875, Boston, Mass. Sou. Rep.: Jas. E. Taylor, P. O. Box 2084, Phone 3-3692, Charlotte, N. C.

HOWARD BROS. CO., Worcester, Mass. Sou. Office and Plant, 244 Forsyth St., S.W., Atlanta, Ga.; Guy L. Melchor, Sou. Agent; S. W. Reps.: Russell A. Singleton Co., Inc., Mail Route 5, Dallas, Tex.; J. Floyd Childs, 244 Forsyth St., S.W., Atlanta, Ga.; Carl M. Moore, 833 York St., Gastonia, N. C.

IDEAL MACHINE CO., Bessemer City, N. C.

JACOBS MFG. CO., THE E. H., Danielson, Conn. Sou. Executive, W. Irving Bullard, Pres., Charlotte, N. C.; Sou. Sales Mgr., S. B. Henderson, P. O. Box 133, Greer, S. C.; Sou. Service Mgr., Dan B. Griffin, P. O. Box 480, Griffin, Ga.; Asst. Sou. Service Mgr., H. McM. Bush, 701 Simpson St., Greensboro, N. C.; Sou. Subsidiary, The E. H. Jacobs Mfg. Corp., Box 544, Charlotte, N. C. Sou. Distributors: Odell Mill Supply Co., Greensboro, N. C.; Textile Mill Supply Co., Charlotte, N. C.; Charlotte Supply Co., Charlotte, N. C.; Gastonia Mill Supply Co., Gastonia, N. C.; Shelby Supply Co., Shelby, N. C.; Sullivan Hardware Co., Anderson, S. C.; Montgomery & Crawford, Inc., Spartanburg, S. C.; Carolina Supply Co., Greenville, S. C.; Greenville Textile Supply Co., Greenville, S. C.; Fulton Supply Co., Atlanta, Ga.; Southern Belting Co., Atlanta, Ga.; The Young & Vann Supply Co., Birmingham, Ala.

JENKINS METAL SHOP, Gastonia, N. C.

JOHNSON CHEMICAL CO., Statesville Ave., Charlotte, N. C., P. O. Box 1418, Stephen J. Hawes.

KEEVER STARCH CO., Columbus, O. Sou. Office, 1200 Woodside Bldg., Greenville, S. C.; Claude B. Iler, Sou. Mgr. Sou. Warehouses: Greenville, S. C., Charlotte, N. C. Sou Reps.: C. C. Switzer, Greenville, S. C.; Luke J. Castile, 924 Monticello Terrace, Charlotte, N. C.; F. M. Wallace, Homewood, Birmingham, Ala.

KEYSTONE BELTING CO., 213 N. Third St., Philadelphia, Pa. Sou. Rep.: T. J. Digby, Jr., P. O. Box 244, Greer, S. C.

LAUREL SOAP MFG. CO., Inc., 2607 E. Tioga St., Philadelphia, Pa. Sou. Reps.: A. Henry Gaede, P. O. Box 1083, Charlotte, N. C.; W. R. Sargent, P. O. Box 1044, Greenville, S. C.

LOPER CO., RALPH E., 500 Woodside Bldg., Greenville, S. C. New England Office, Buffington Bldg., Fall River, Mass.

LUBRIPLATE DIV., FISKE BROS. REFINING CO., 129 Lockwood St., Newark, N. J.

MEADOWS MFG. CO., P. O. Box 4354, Atlanta, Ga.

MERROW MACHINE CO., THE, 8 Laurel St., Hartford, Conn. E. W. Hollister, P. O. Box 721, Spartanburg, S. C.; R. B. Moreland, P. O. Box 895, Atlanta, Ga.

MILL DEVICES CO., Gastonia, N. C. R. D. Hughes Sales Co., 2106 S. Lamar St., Dallas, Tex., Texas and Arkansas; Eastern Rep. (including Canada), C. E. Herrick, 44 Franklin St., Providence, R. I.; European Rep., Mellor, Bromley & Co., Ltd., Leicester, England.

NATIONAL ANILINE DIVISION ALLIED CHEMICAL & DYE Corp. Gen. Office, Rector St., New York City. Julian T. Chase, Res. Mgr., 201 W. First St., Charlotte, N. C.; Kenneth Mackenzie, Asst. to Res. Mgr., 201 W. First St., Charlotte, N. C. Salesmen: D. S. Moss, W. L. Barker, R. B. Murdoch, Harry L. Shinn, J. W. McCalla, A. R. Akerstrom, 201 W. First St., Charlotte, N. C.; J. H. Shuford, Jefferson Standard Bldg., Greensboro, N. C.; J. A. Parker, Jefferson Standard Bldg., Greensboro, N. C.; H. A. Rodgers, 1006 James Bldg., Chattanooga, Tenn.; J. A. Spratt, 1006 James Bldg., Chattanooga, Tenn.; J. I. White, American Savings Bank Bldg., Atlanta, Ga.; W. H. Jackson, Apt. 10-A, Country Club Apts., Columbus, Ga.; F. L. Feagle, Jr., Masonic Temple Bldg., New Orleans, La.

NATIONAL RING TRAVELER CO., 354 Pine St., Pawtucket, R. I. Sou. Office and Warehouse, 131 W. First St., Charlotte, N. C. Sou. Agt., L. E. Taylor, Charlotte, N. C. Sou. Reps.: Otto Pratt, Union Mills, N. C.; H. B. Askew, Box 272, Atlanta, Ga.; Wm. S. Johnstone, P. O. Box 993, Gastonia, N. C.

NEW ENGLAND BOBBIN & SHUTTLE CO., Nashua, N. H. Sou. Reps.: Charlotte Supply Co., Charlotte, N. C.; Industrial Supply Co., Inc., Clinton, S. C.; W. G. Hamner, Box 267, Gastonia, N. C.; A. G. Murdaugh, Griffin, Ga.

N. Y. & N. J. LUBRICANT CO., 292 Madison Ave., New York City. Sou. Office, 1000 W. Morehead St., Phone 3-7191, Charlotte, N. C., Spartanburg, S. C., Atlanta, Ga., Greenville, S. C. Falls L. Thomason, Sou. Dist. Mgr.

NOBLE, ROY, New Bedford, Mass. Sou. Rep.: John P. Batson, P. O. Box 841, Greenville, S. C.

NORLANDER MACHINE CO., New Bedford, Mass. Sou. Plant, York Road, Gastonia, N. C.

NORMA HOFFMANN BEARINGS CORP., Stamford, Conn.

NORTH, FRANK G., Inc., P. O. Box 92, Marietta, Ga.; P. O. Box 844, Atlanta, Ga. Reps.: W. W. Greer, P. O. Box 336, Greenville, S. C.; W. J. Greer, P. O. Box 305, Greenville, S. C.

ONYX OIL & CHEMICAL CO., Jersey City, N. J. Sou. Reps.: Edwin W. Klumph and Cliff C. Myers, 121 E. 3rd St., Charlotte, N. C.; Cliff Smith, P. O. Box 671, Atlanta, Ga.

PABST SALES CO., 221 N. LaSalle St., Chicago, Ill. Sou. Rep.: W. A. Pardue, 2721 Augusta Road, Greenville, S. C., P. O. Box 1147. Sou. Warehouse, Textile Warehouse Co., Greenville, S. C.

PARKS-CRAMER CO., Plants at Fitchburg, Mass., and Charlotte, N. C. Atlanta Office, Bona Allen Bldg.

PEASE & CO., J. N., Johnston Bldg., Charlotte, N. C.

PENICK & FORD, LTD., Inc., 420 Lexington Ave., New York City; Cedar Rapids, Iowa. P. G. Wear, Sou. Sales Mgr., 805 Bona Allen Bldg., Atlanta, Ga.; J. H. Almand, W. J. Kirby, Glenn M. Anderson, Atlanta Office; C. T. Lassister, Greensboro, N. C.; Guy L. Morrison, 902 Montgomery Bldg., Spartanburg, S. C.; T. H. Nelson, Charlotte, N. C. Stocks carried at convenient points.

PIEDMONT COLOR & CHEMICAL CO., High Point, N. C.

PIEDMONT PROCESSING CO., Belmont, N. C.

PRICE SPINDLE & FLYER CO., Spartanburg, S. C.

PROCTOR & SCHWARTZ, Inc., Philadelphia, Pa. Sou. Office, Johnston Bldg., Charlotte, N. C.

PROVIDENT LIFE & ACCIDENT INS. CO. (Group Accident and Health and Welfare Plans Div.), Chattanooga, Tenn. Southeastern Div. Office, 815 Commercial Bank Bldg., Gastonia, N. C.

RAGAN RING CO., Atlanta, Ga.

ROHM & HAAS CO., 222 W. Washington Square, Philadelphia, Pa. Sou. Office, 1109 Independence Bldg., Charlotte, N. C., Phone 2-3201, Charlotte, N. C.; A. K. Haynes, 1811 Meadowdale Ave., N.E., Atlanta, Ga. Phone Atwood 2619.

ROSE & CO., E. F., Maiden, N. C.

ROY & SON CO., B. S., Worcester, Mass. Sou. Office, Box 1045, Greenville, S. C., Jack Roy, Rep. Sou. Distributors: Odell Mill Supply Co., Greensboro, N. C.; Textile Mill Supply Co., Charlotte, N. C.; Textile Supply Co., Dallas, Tex.

SACO-LOWELL SHOPS, 60 Batterymarch St., Boston, Mass. Sou. Office and Supply Depot, Charlotte, N. C., Walter W. Gayle, Sou. Agt.; Atlanta, Ga., John L. Graves and Miles A. Comer, Selling Agts.; Greenville, S. C., H. P. Worth, Selling Agt.

SEYDEL-WOOLLEY & CO., 748 Rice St., N.W., Atlanta, Ga.

SHINGLE & GIBB LEATHER CO., Philadelphia, Pa.

SINCLAIR REFINING CO. Dist. Office: 578 W. Peachtree St., Atlanta, Ga. State offices: Atlanta, Ga.; Birmingham, Ala.; Columbia, S. C.; Charlotte, N. C.; Nashville, Tenn.; Jackson, Miss. Industrial Reps.: P. W. Godard, Birmingham, Ala.; W. H. Lipscomb, Atlanta, Ga.; W. M. Newsom, Tifton, Ga.; W. I. Crichton, Jackson, Miss.; J. O. Holt, Raleigh, N. C.; C. C. Nix, Charlotte, N. C.; L. E. Diltz, Walterboro, S. C.; J. F. Whelchel, Greenville, S. C.; G. C. Kimbrough, Knoxville, Tenn.; P. A. Raiche, Memphis, Tenn.

SJOSTROM MACHINE CO., Lawrence, Mass. Sou. Repr.: E. W. Hollister, P. O. Box 721, Spartanburg, S. C.

SOCONY-VACUUM OIL CO., Inc., Southeastern Div. Office, 1602 Baltimore Trust Bldg., Baltimore, Md. Warehouses: Union Storage Co., 1000 W. Morehead St., Charlotte, N. C.; Textile Warehouse Co., 511 Rhett St., Greenville, S. C.; South Atlantic Bonded Warehouse Co., Greensboro, N. C.; New South Express Lines, Columbia, S. C.; Terminal storage Corp., 317 N. 17th St., Richmond, Va.; Taylor Transfer Co., 102 Boush St., Norfolk, Va.

SOLVAY SALES CORP., 40 Rector St., New York City. Sou. Branches: 212 S. Tryon St., Charlotte, N. C., H. O. Pierce, Mgr. Sou. Reps.: Earl H. Walker, 1016½ Minerva Ave., Durham, N. C.; H. W. Causey, 215 Middleton Drive, Charlotte, N. C.; R. E. Lowes, 3704 Starmount Drive, Greensboro, N. C.; M. W. Fletcher, 1 Pritchard Way, N.E., Atlanta, Ga.

SONOCO PRODUCTS CO., Hartsville, S. C.

SOUTHERN SPINDLE & FLYER CO., Charlotte, N. C.

SOUTHERN STANDARD MILL SUPPLY CO., 512-514 W. Fourth St., Charlotte, N. C. A. Benson Davis, Mgr.

STANDARD-COOSA-THATCHER CO., Chattanooga, Tenn. Sales and Executive Offices, Lafayette Bldg., Philadelphia, Pa. Sou. Reps.: W. S. Lawson, c/o Standard-Coosa-Thatcher Co., Chattanooga, Tenn.; J. P. Rickman, c/o Standard-Coosa-Thatcher Co., Chattanooga, Tenn.; N. P. Murphy, Guilford Bldg., Greensboro, N. C.

STANLEY WORKS, THE, New Britain, Conn. Sales Reps.: A. Y. Bristoll, 104 Maple Ave., Tel. Narberth 3795, Narberth, Pa.; G. R. Douglas, 707 Columbian Mutual Towers, Tel. 8-7117, Memphis, Tenn.; M. A. Hawkins, 3813 General Taylor St., Tel. Upton 6057-J, New Orleans, La.; H. C. Jones, c/o The Stanley Sales Co., 631 Humphries St., S.W., Tel. Main 4110, Atlanta, Ga.; W. D. Low, 17 West Brow Terrace, Chattanooga, Tenn.; G. J. McLernon, 209 Hubbard St., San Antonio, Tex.; C. W. Lynch, 1336 E. Morehead St., Charlotte, N. C.

STEEL HEDDLE MFG. CO., Main Office and Plant, 2100 W. Allegheny Ave., Philadelphia, Pa. Greensboro Office, Guilford Bank Bldg., Box 1917, Greensboro, N. C., C. W. Cain, Mgr.; Henry P. Goodwin, Sales and Service. Greenville Office and Plant, 621 E. McBee Ave., Box 1899, Greenville, S. C., J. J. Kaufmann, Jr., Asst. V.-Pres. and Mgr. of Southern Divisions; Davis L. Batson and Sam Zimmerman, Jr., Sales and Service. Atlanta Office and Plant, 268 McDonough Blvd., Box 1496, Atlanta, Ga., H. R. Gaffney, Mgr.; Vernon A. Graff, Asst. Mgr.; Barney R. Cole, Sales and Service. Southern Shuttles, a division of the Steel Heddle Mfg. Co., 621 E. McBee Ave., Box 568, Greenville, S. C., J. J. Kaufmann, Jr., Mgr.; Louis P. Batson, Director of Sales.

STEIN, HALL & CO., Inc., 285 Madison Ave., New York City. Sou. Office, Johnston Bldg., Charlotte, N. C., Ira L. Griffin, Mgr., T. C. Davis; W. N. Kline, 17 Camille Ave., Greenville, S. C.; E. D. Estes, 1257 Durand Dr. N.E., Atlanta, Ga.

STERLING RING TRAVELER CO., 101 Lindsey St., Fall River, Mass. Sou. Rep.: Geo. W. Walker, P. O. Box 1894, Greenville, S. C.; D. J. Quillen, P. O. Box 443, Spartanburg, S. C.

TERRELL MACHINE CO., Charlotte, N. C. E. A. Terrell, Pres. and Mgr.

TEXAS CO., THE, New York, N. Y. Dist. Offices, Box 901, Norfolk, Va., and Box 1722, Atlanta, Ga. Bulk Plants and Warehouses in all principal cities. Lubrication Engineers: P. C. Bogart, Norfolk, Va.; D. L. Keys, Richmond, Va.; W. H. Boebel, Roanoke, Va.; F. M. Edwards, Goldsboro, N. C.; W. P. Warner and R. L. Scott, Greensboro, N. C.; B. D. Heath and C. W. Meador, Charlotte, N. C.; J. S. Leonard, Greenville, S. C.; F. G. Mitchell, Charleston, S. C.; L. C. Mitchum, Atlanta, Ga.; A. C. Keiser, Jr., Atlanta, Ga.; J. G. Myers, Birmingham, Ala.; P. H. Baker, textile engineer, New York, N. Y.

TEXTILE APRON CO., East Point, Ga.

TEXWOOD MFG. & SALES CO., Greenville, S. C.

TODD-KEESE BELTING & SUPPLY CO., 1301 E. Ozark St., Gastonia, N. C.

U S BOBBIN & SHUTTLE CO., Lawrence, Mass. Sou. Plants, Greenville, S. C.; Johnson City, Tenn. Sou. Reps.: E. Rowell Holt, 208 Johnston Bldg., Charlotte, N. C.; M. Ousley, P. O. Box 816, Greenville, S. C.; D. C. Ragan, High Point, N. C.; A. D. Roger, Johnson City, Tenn.

U. S. RING TRAVELER CO., 159 Aborn St., Providence, R. I. Sou. Reps.: William W. Vaughan and Wm. H. Rose, P. O. Box 792, Greenville, S. C.; Oliver B. Land, P. O. Box 158, Athens, Ga.; Torrence L. Maynard, P. O. Box 456, Belmont, N. C.

UNIVERSAL WINDING CO., Providence, R. I. Sou. Offices, 819 Johnston Bldg., Charlotte, N. C. Reps.: R. M. Mauldin and Ike E. Wynne; 1008 Norris Bldg., Atlanta, Ga. Rep.: J. W. Stribling.

UPCHURCH & SONS, Inc., C. L., Athens, Ga.

VALENTINE & CO., New York City. Sou. Rep.: T. Holt Haywood, 612 S. Main St., Winston-Salem, N. C.

VEEDER-ROOT, Inc., Hartford, Conn. Sou. Office, Room 231 W. Washington St., Greenville, S. C., Edwin Howard, Sou. Sales Mgr.

VICTOR RING TRAVELER CO., Providence, R. I., with Sou. Office and Stock Room at 173 W. Franklin Ave., P. O. Box 842, Gastonia, N. C. Also stock room in charge of B. F. Barnes, Jr., Mgr., 1733 Inverness Ave., N.E., Atlanta, Ga.

WAK Industries, Charlotte, N. C.

WALKER MFG. CO., Inc., Philadelphia, Pa. Sou. Rep.: R. T. Osteen, 11 Perry Road, Phone Greenville 1869, Greenville, S. C. Greenville Textile Supply Co., Greenville, S. C.; Odell Mill Supply Co., Greensboro, N. C.; R. D. Hughes Sales Co., 2106 S. Lamar St., Dallas, Tex.; R. B. Dorman, Box 66, Station C, Atlanta, Ga.

WARWICK CHEMICAL CO., W. Warwick, R. I. Sou. Branch Factory at Rock Hill, S. C. Sou. Reps.: M. M. McCann, Box 825, Burlington, N. C.; Henry Papini, 306 Mills Ave., Greenville, S. C.; W. E. H. Searcy, III, Box 123, Griffin, Ga.

WATSON-WILLIAMS MFG. CO., Millbury, Mass. Sou. Office: E. V. Wilson, 810 Woodside Bldg., Greenville, S. C.

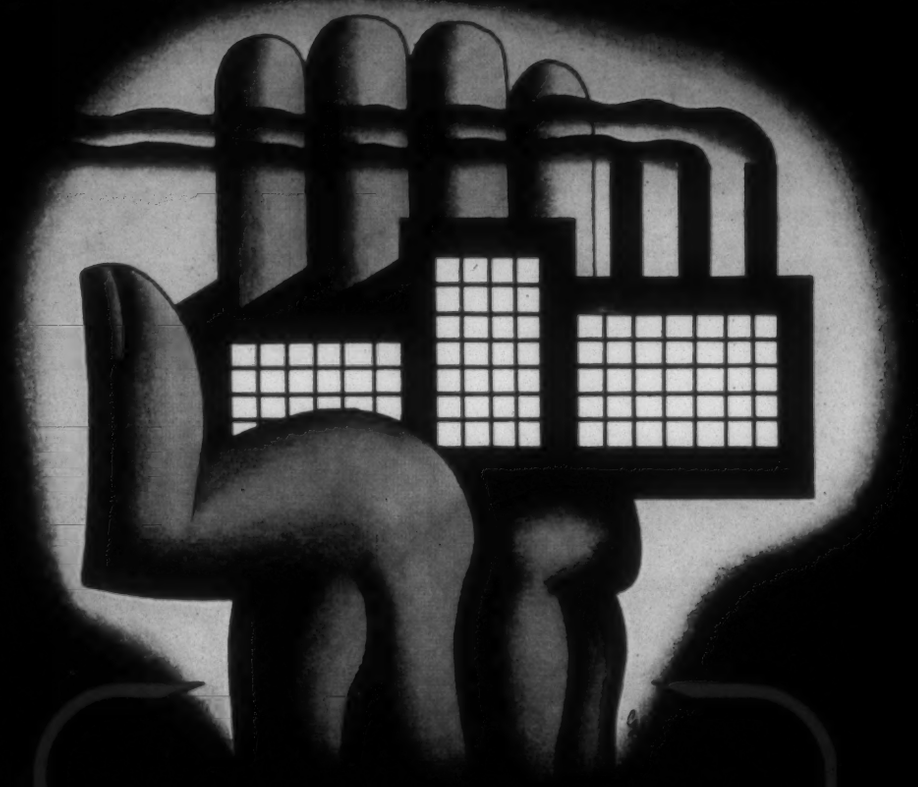
WHITIN MACHINE WORKS, Whitinsville, Mass. Sou. Office, Whitin Bldg., Charlotte, N. C., W. H. Porcher and R. I. Dalton, Mgrs.; 1317 Healey Bldg., Atlanta, Ga. Sou. Reps.: M. P. Thomas, Charlotte Office; I. D. Wingo and M. J. Brantley, Atlanta Office.

WHITINSVILLE SPINNING RING CO., Whitinsville, Mass. Sou. Rep.: H. Ross Brock, 3 Vannoy St., Greenville, S. C., Phone 2824.

WICKWIRE SPENCER STEEL CO., 500 Fifth Ave., New York, N. Y. J. W. Horner, Box 632, Atlanta, Ga., covering Ga., Ala., Tenn. and Miss.; George H. Woolley, Jr., 935 Henley Place, Charlotte, N. C., covering N. C. and S. C.

WINDLE & CO., J. H., 231 S. Main St., Providence, R. I.

WOLF, JACQUES & CO., Passaic, N. J. Sou. Reps.: C. R. Bruning, 302 N. Ridgeway Drive, Greensboro, N. C.; G. W. Searell, Box 102, Lenoir City, Tenn.



Out of the Darkness

Out of the darkness emerges a clear picture of our duties in the Victory effort. America's great Textile Industry becomes a vital weapon in the battle of production...and the Warwick Chemical Company pledges its skilled technicians and research facilities, its specialized products and new developments to the service of the industry.

Warwick Chemical Company

WEST WARWICK, R. I. • ROCK HILL, S. C.
580 FIFTH AVE., NEW YORK, N. Y.